THE FUTURE OF MONETARY POLICY

HEARINGS

BEFORE THE

JOINT ECONOMIC COMMITTEE

CONGRESS OF THE UNITED STATES

NINETY-SEVENTH CONGRESS

SECOND SESSION

JUNE 2, 8, 10, AND 15, 1982

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THE FUTURE OF MONETARY POLICY

WEDNESDAY, JUNE 2, 1982

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The committee met, pursuant to notice, at 9:38 a.m., in room 2359, Rayburn House Office Building, Hon. Henry S. Reuss (chairman of the committee) presiding.

Present: Representative Reuss.

Also present: James K. Galbraith, executive director; and William R. Buechner and Chris Frenze, professional staff members.

OPENING STATEMENT OF REPRESENTATIVE REUSS, CHAIRMAN

Representative REUSS. Good morning.

The Joint Economic Committee will be in order for the first of a series of hearings on the future of monetary policy. We meet at a time when the Congress is busy discrediting the budgetary process and the Federal Reserve is busy discrediting the monetary process, with chaotic results.

The kingdom of monetary philosophers is in turmoil, and great disenchantment exists over the conduct of monetary policy by the Federal Reserve, firmly backed by the administration. The Congress in its budgetary resolutions—for the moment derailed, but, I would hope, capable of getting back on the tracks again—is prepared to instruct the Federal Reserve to, in the words of a congressional resolution, reevaluate its present monetary targets as deficits are reduced.

CORRESPONDENCE WITH CHAIRMAN VOLCKER ON CONGRESSIONAL DIRECTIVE

Our hearings will serve a dual purpose. First, with respect to the congressional directive to the Federal Reserve, which I have just alluded to, a few words need to be said. Recently, on May 12, I addressed a letter to the Federal Reserve Open Market Committee inquiring into press accounts that the Open Market Committee might be inclined to flout any guidance that Congress might give it. I wrote the Open Market Committee and Chairman Volcker saying if this is so, tell us now so that we may know of your prospective intention to tell Congress to jump in the lake. Fortunately, I received a letter dated May 24, 1982, from Chairman Volcker, which I herewith include in the record at this point.

[The letter referred to follows:]

BOARD OF GOVERNORS
OF THE FEDERAL RESERVE SYSTEM,
Washington, D.C., May 24, 1982.

Hon. HENRY S. REUSS,
Chairman, Joint Economic Committee,
Washington, D.C.

DEAR MR. CHAIRMAN: I am responding to your letter of May 12 regarding the attitude of the Federal Open Market Committee toward a Congressional resolution relating to monetary policy. I am, of course, aware of the language adopted by the House and Senate Budget Committees in that respect. I might add, too, that I am aware of no legal opinion requested or given to "justify a refusal to comply with a Congresssional directive."

The Committee, at my request, did discuss the general question in the course of its meeting on May 18. I was asked to confirm to you the full understanding of all members that the Federal Reserve is a creation of Congress and responsible to it, that the Congress plainly has the Constitutional authority and the right to determine the control of money, that the System is subject to Congressional oversight and, of course, will follow the law. I and my predecessors have, as you note, consistently expressed our views in that vein.

As you know, Congress has delegated the process of monetary policy formulation and implementation to the Federal Reserve since the Federal Reserve Act was originally passed in 1913. The present institutional arrangements reflect, in my view, the belief of the Congress that the public interest is served by an institutional setting that can combine experienced judgment and regional representation in its governing bodies, and continuity in expert analysis, with a certain insulation from transient political influences. A factor in that approach is recognition that monetary policy manipulated toward short-term or partisan purposes could have potentially adverse repercussions for our economy.

While I personally believe those considerations remain valid today, Congress, of course, can at any time determine to change those arrangements.

I have also stressed repeatedly that the Federal Reserve cannot and does not make or implement monetary policy with mechanical rigidity, or without consideration of a wide variety of relevant factors. In selecting our targets for money growth and in carrying out our operations from week to week or month to month, we are mindful of the financial and economic environment, certainly including, among other factors, the posture of fiscal policy. Thus, you may be assured that the Federal Reserve will pay careful attention to the implications of any change in the budgetary outlook as it evolves. That, as I understand it, is the sense of the language in the proposed resolution, and I can assure you the Federal Open Market Committee, as always, will give full attention to any Congressional resolution concerning our responsibilities. In the light of that general understanding, it seemed to me unnecessary and inappropriate to call a formal vote on a hypothetical resolution of the sort you indicated.

In affirming our recognition of the ultimate authority of the Congress over the Federal Reserve, I would also add that action by the Congress to indicate or direct a specific course for monetary policy, such as a precise monetary target, would be a decision of great moment, for the Congress and for the Federal Reserve. It would, in effect, move toward shifting directly to the Congress the responsibility for decisions overlaid with technical as well as substantive complexities, in the process clearly implying a change in the institutional arrangements embodied in the Federal Reserve Act. In that connection, the emphasis in your letter on a single measure of monetary policy—M1, which is being affected, among other influences, by the impact of financial innovations in the market place which require continuing analysis and judgment—seems to me misplaced. In any event, I would hope that Congress would refrain from adopting a specific target-setting bill or resolution without the most careful consideration, through hearings in the appropriate Committees and otherwise, taking account not only of the technical implications of the proposal but the consequences of such a "directive" for institutional arrangements in place for almost 70 years.

In closing, let me reiterate my conviction that forceful, definitive action by the Congress to assure a downward trend in the Federal deficit as the economy recovers is a key to greater confidence in financial markets and achieving and maintaining the lower interest rates necessary to support sustained economic expansion.

Sincerely,

PAUL A. VOLCKER.

Representative REUSS. I find the letter entirely satisfactory. It states on the part of Chairman Volcker:

> I was asked to confirm to you the full understanding of all members that the Federal Reserve is a creation of Congress and responsible to it, that the Congress plainly has the constitutional authority and the right to determine the control of money, that the system is subject to congressional oversight and, of course, will follow the law.

He then goes on to say that he and the Open Market Committee will fully follow that congressional guidance. He goes on to say that, in speaking of the response of the Federal Reserve to congressional directives:

> A factor in that approach is recognition that monetary policy manipulated toward short-term or partisan purposes could have potentially adverse repercussions for our economy.

The Chairman's fears are fortunately without foundation since the congressional resolution, far from being partisan, was completely bipartisan. In fact, it was proposed by Chairman Domenici of the Senate Budget Committee, and was unanimously approved on both sides of the aisle, in the Senate and in the House, where the language is identical to that of the Senate.

Chairman Volcker's reply of May 24 goes on to say:

> I can assure you that the Federal Open Market Committee, as always will give full attention to any congressional resolution concerning our responsibilities.

That, too, is an important point because while the Federal Reserve has, unfortunately for all of us, disregarded the admonition of the House Banking Committee and has encased itself in a 2½- to 5½-percent monetary corset which has brought great difficulties to the country, it is reassuring that the Federal Open Market Committee says that it will give full attention to a congressional resolution. That's precisely what it will be confronted with if Congress pulls itself together and passes the budget resolution containing the direction to the Federal Reserve.

Chairman Volcker goes on to say:

> In affirming our recognition of the ultimate authority of the Congress over the Federal Reserve, I would also add that action by the Congress to indicate or direct a specific course for monetary policy, such as a precise monetary target, would be a decision of great moment for the Congress and for the Federal Reserve.

WHY THE MONEY TARGETS SHOULD BE REEVALUATED

Fortunately, neither the Congress nor I think the Federal Reserve contemplates such a cataclysm. We aren't mandating the Federal Reserve to achieve this or that monetary target. We are simply, by our resolution, asking the Federal Reserve to shake off the albatross which now perches upon it, the 2½- to 5½-percent monetary target. The reason why this is an albatross for the Fed and for the Nation is that the Fed has greatly exceeded its monetary target, it is currently at something close to a 9-percent increase in M_1 this year, so that if the Fed persists, its monetary credibility and that of its targets will be totally destroyed.

If, on the other hand, it now tries to get within its target with half the year almost gone, it will have to squeeze the money supply to the same unconscionable degree that attended monetary policy in 1981 and brought on the recession. Either way, interest rates will be unconscionably high and the recession will continue.

So, in essence, what Congress asks the Federal Reserve to do in the budget resolution is to reevaluate its present monetary targets and to devise new targets more in keeping with the goals of maxium employment, production, and purchasing power. It can, in our judgment, clearly do that without in any way disturbing the markets.

Occasionally apologists for the Fed suggest that any change in things is going to spook the money markets. This, of course, is pure hogwash. If the Fed does it properly, admits error, as all of us must from time to time, the markets, far from being spooked, should be encouraged by a display of frankness on the part of the central bank—all too rare in monetary history. That is all the Congress is asking the Fed to do.

Now, what should the Fed, pursuant to its own sound discretion, do? Should it simply raise its targets so that it finds itself not kidding the public, while actually getting within the new target range? Should it rebase them, but without changing the growth range? Or, should it simply relax the ceiling of its present target ranges without troubling to specify a new ceiling for the rest of 1982? Each of these possible solutions might supply an adequate response.

It is necessary now to examine with an open mind the implications and possible consequences of these so that the Federal Open Market Committee, in its deliberations in the days ahead and particularly after Congress has given it its directive, can at least have formal congressional input.

FRAMEWORK OF MONETARY POLICY SHOULD BE REEXAMINED

The second subject of these hearings, and beyond the immediate problem of the Fed, will be a reexamination of the framework of monetary policy formulation as it has existed since 1975. Has that framework been part of the problem or has it been part of the solution? If it is part of the problem, should it be replaced, and if so, with what? Do we control interest rates? Do we control the growth of the total debt? Or, do we devise some other methodology under which the Fed can announce and subsequently correct or refine its policy objectives? In this connection one might well ask is monetarism dead and if so, what new phantom must be brought into place in its stead.

We are fortunate in having a distinguished group of students of monetary policy before us. Our first witness is an old friend of this committee, Eliot Janeway, president of Janeway Publishing & Research Co. of New York. You are most welcome.

Please proceed in your own way.

STATEMENT OF ELIOT JANEWAY, PRESIDENT, JANEWAY PUBLISHING & RESEARCH CO., NEW YORK, N.Y.

Mr. Janeway. Mr. Chairman, it is a great privilege and a high honor to accept your invitation to testify before this committee today. Since its launching, I have respected it as the economic conscience of Congress and as the economic chaperon of successive administrations, each conspicuously in greater need of guidance than its predecessor. I particularly cherish this invitation, Mr. Chairman, because of the warm memories it recalls of the tutelage you and I shared during the last Depression under the uncommon guidance of the late, great Sumner Slichter.

HIGH INTEREST RATES SUBVERT THE ANTITRUST LAWS

I submit that the present level of interest rates is subverting our national commitment to enforce the antitrust laws more insidiously than "the malefactors of great wealth," whose schemes originally provoked the passage of the antitrust laws, ever dreamed of doing. I believe that the time has come for this policy-formulating watchdog committee of the Congress to scrutinize the subversive impact of double-digit interest rates on the antitrust laws and on the basic right of free competition they guarantee.

I suggest that the Congress is being confronted with the choice of putting a limit on the authority it has granted the Federal Reserve Board to manage monetary matters, giving the Federal Reserve Board a license to nullify the antitrust laws.

"Subversion" has a sinister and deadly meaning. We are conditioned to think of its target as our national security, and of its agents in the conspiratorial atmosphere of a James Bond movie. But the process of subversion is not necessarily limited to acts of treason, perpetrated under cover of darkness. Public officials of unimpeachable integrity are fully capable of sponsoring programs dedicated to stabilizing the performance of the economy which, instead, subvert the accepted rules of the marketplace to the echo of complacement applause from their peers.

FED CAN'T CONTROL INTEREST RATES

In raising my voice in criticism of the Federal Reserve Board for negating our commitment to the letter as well as to the spirit of our antitrust laws, I am anxious to go on record in dissent against the popular impression that the Federal Reserve Board actually wields the power to fix interest rates or to control the money supply. On the contrary, I observe its repeated embarrassments as it scrambles to follow, not lead, the trend of interest rates, revealing its inability even to count the money supply.

BUT DOES BELIEVE HIGH RATES ARE GOOD FOR US

This said, however, the fact is that the Federal Reserve Board has thrown the enormous authority of its opinion-making operations behind the dogma that the bad medicine of high interest rates is good for us. Granting freely that the Federal Reserve Board is not solely responsible for pushing interest rates higher than they have ever been in a collapsed economy, one reason they are this high reflects the unmistakable impression the Federal Reserve Board has given the markets that it wants them to be high. Moreover, the Board has prevailed upon the White House and the Treasury to endorse this preference.

Finally, the one interest rate over which the Board exerts the most influence—the Fed funds rate at which banks borrow from each other—remains in double-digit territory. It is consistently higher than the preferred rate at which liquid banks are offering term money to liquid corporations or than the discount rate.

The popular perception of borrowing costs is distorted by an optical illusion which assumes that the cost of money is the same to all borrowers. Not all borrowers are equal. Some do not need to borrow to survive; others do. Some are free to borrow at incentive rates guaranteeing profits on their borrowings; others are forced to borrow at loanshark rates to survive.

The right to compete, however, is the fundamental law of our economic society. It is the indispensible supplement to the Bill of Rights. It is institutionalized in our legal system, specifically, in the antitrust laws, whose acceptance and enforcement is bipartisan. It was the revered Republican elder statesman, John Sherman of Ohio, who sponsored our original antitrust law. A revered Democrat elder statesman, Louis D. Brandeis—subsequently Mr. Justice Brandeis—persuaded President Wilson to sponsor the Clayton Act. The Sherman and Clayton Acts were put on the books to curb the subversive encroachments of trusts upon the rights of individuals to compete in markets deemed free.

TAX STATUS OF INTEREST

Nothwithstanding these competitive facts of financial life, only one adjustment is usually made for the cost of money: the so-called real rate of interest, adjusted for inflation, rises, too, for everybody. But the popular discussion makes no allownace for the critical calculation that separates those making a good thing out of the storm from those drowning in it.

The different tax status of competing borrowers explains why the interest rate burden is much lower than the actual rate paid by borrowers buoyed by earnings, and why it is much higher for borrowers drained by losses.

The prime rate is largely a fiction, more real in the media than in the marketplace. Few commercial banks of consequence have many prime rate borrowers on their books. Chances are that their best-rated borrowers, who under one hat or another are apt to be their biggest depositors, enjoy credit accommodation at significant discounts under the prime rate, while their less fortunate competitors at the credit window are obliged to pay substantial premiums above the prime rate.

BANKS LEND CHEAPLY TO BUSINESSES THAT DON'T NEED MONEY

With the prime rate in the range of 16 percent, well-managed commercial banks, with liquidity to spare and incentives to upgrade the quality of their deposits as well as their loans, are offering term money to business borrowers who do not need it at 4 points under prime, that is, at 12 percent, with no time deposits requested or required, nor any repayment schedules involved. The banks are out looking for the loans; the prospective borrowers they are soliciting are depositors comfortable for cash. The incentives to the banks are to convert deposits, which increase costs, and loans, which increase revenues.

Borrowings by these profit corporations are entirely discretionary. They report earnings; therefore, they pay taxes. Consequently, they are entitled to deduct interest from their taxable profits. For them, a 12-percent rate of interest, subject to no pay-down schedule, can be taken to mean no more than a 6-percent cost of money, that is, a return to pre-profit-squeeze normalcy. Profit corporations routinely accept such offers to borrow money at cheap after-tax rates of interest and reinvest it to earn much higher, tax-sheltered rates of return.

AND AT HIGH RATES TO BUSINESSES THAT DO

Now, let us consider the plight of the competitor in the same marketplace who has run out of earnings and consequently, out of cash and out of deductions. If there is anything surer than death and taxes, it is the certainty that loss corporations need new borrowings to replace lost earnings. Just as inescapably, they need to recapture earnings in order to get free of borrowings. In a 16-percent prime rate market, competitors who have been borrowing more as they have been earning less wind up needing to borrow still more after they stop earning anything.

The going rate for borrowers on the sick list ranges up to four or six points over prime; the higher rate insures the higher risk to the lender—especially when, as is increasingly the case, the need for new loans is dictated by the pressure to pay the interest on old loans. Assuming a 12-percent pretax rate of interest for competitors in the black, a 20-percent rate of interest for competitors in the red saddles them with an onerous eight point—20 percent minus 12 percent—cost penalty before they struggle to meet the payroll and to borrow the interest they owe.

THE INTEREST TAX DEDUCTION DISTORTS COSTS

But that is the least of it. As the tax adjustment shows, the competitor who is profitable to begin with, and on whom cheap money is being showered, enjoys an open invitation from the tax-collection arm of our Government to mint money at 6 percent or under in a money-market artificially measured at 16 percent. But the money-managing arm of this same tax-collecting arm of the Government, and the White House behind it, are sounding the death knell for competitors in the red.

The right to deduct interest is a mockery to a loss corporation. The cost of earning a 20-percent interest burden cannot be shrugged off as just half, or even less, than the actual tab paid. Nondeductible dollar for nondeductible dollar, the cost is at least the full 20 percent, if not more, depending on the rate charged. At a 20-percent after-tax cost of money, the credit-hungry borrower in the red is spotting at least a 14-percent tax adjusted cost advantage—20 percent minus 6 percent—to his competitor in the black.

In this case, the strong competitor simply elects to use excess cash to solidify his advantage by generating unearned income. It's axiomatic that the shorter of cash a loss corporation becomes, the more credit intensive it becomes, and, therefore, the more decisive the after-tax advantage enjoyed by profit corporations in a high interest rate market becomes. But the spread between a 6-percent tax-adjusted cost of money for competitors who don't need to borrow it, and a 20-percent plus cost for borrowers who can't manage without it, is too wide to be tolerable.

RESULT—WIDESPREAD BANKRUPTCIES

Mr. Chairman, I have offered this calculation by way of explaining that profit corporations not motivated by the well-known habits of sharks swimming around schools of mackerel, nevetheless, are gobbling up their competitors in shark-like fashion. Loss corporations are being exterminated wholesale as the direct and inescapable consequence of this negative spread. An 8-percent pretax advantage enjoyed by borrowers able to take interest charges as deductible over those not, let alone a 14-percent tax-adjusted advantage, guarantees that the epidemic of bankruptcies will spread and the toll of unemployment will rise.

Double-digit interest rates are now living a life of their own, feeding on the debris of the financial ghetto to which businesses in the red have been consigned. Their distress borrowings are perpetuating these pernicious interest rates; and these pernicious interest rates are forcing more necessitous borrowings which cannot be repaid.

In the name of stabilizing our economy, therefore, our monetary masters, fortified by their dogmatic wisdom, are unstablizing our society, in righteous innocence of the subversion they are perpetrating upon the antitrust laws of the land.

Mr. Chairman, I suggest that this committee call upon the antitrust authorities in the Department of Justice, who have not been working overtime in recent months, to do their duty on behalf of the victims of our misguided and subversive monetary policy. Many a private corporation management has been subjected to antitrust scrutiny and restraint for having done less to subvert competition than the Federal Reserve Board is now doing.

I recommend that you consider the appropriateness of forwarding the flawed performance record of the Federal Reserve Board to the Antitrust Division of the Justice Department.

DOUBLE STANDARDS FOR BANK LOANS

Representative REUSS. Thank you, Mr. Janeway. You bring up memories of Thurmond Arnold and others. Let me ask you a couple of questions.

How can the banks afford to make 12-percent business loans to these favored profitable corporations?

Mr. JANEWAY. First off——

Representative REUSS. They have to buy their money and bankers acceptances currently are what, 13 percent, something like that? How do they do that? Or, is it a loss leader?

Mr. JANEWAY. No. We have a double standard for gaging the position of banks. Some banks, notably in New York, also Chicago, are 85-percent lent. But a number of banks around the country which have anticipated this difficulty, are under 40-percent lent, some 30-percent lent. So they have excess cash. They are offering this money to big depositors. They are really saving money on it because they are getting interest on money on which now they are being forced to pay time deposits. The corporations to which they are offering this money are corporations with big deposits in CD form. So, they are working off CD's that are onerous which they have had to take from favored depositors, from big depositors. That's the first consideration.

NONPRODUCTIVE LOANS

Second, the 12 percent they are offering is really at parity with the discount rate. But the banks which are doing this are banks which don't want to own long-term bonds. Their portfolios are down to Treasury bills maturing within a year or so. Their loans are only to people who increasingly don't want them, people who are not using money in productive fashion. We see the money accepted and going out to buy dividends which are deemed safe, in companies like Exxon at over 10 percent. That's a yield that's 92½-percent tax free to a corporation, enjoying the dividend exclusion of 85 percent presumed to be in a 50-percent tax bracket. So to them as has it goes it.

Representative REUSS. I would appreciate your developing a little more on your antitrust point. You have certainly made the point, I think with devastating clarity, that the totality of our monetary and tax policies——

Mr. JANEWAY. Taking the two together.

Representative REUSS. Taking the two together, is murder for smaller independent innovating businesses and is a great consolation to profitable corporations. I see that. How do you link that up with the alarming tendency, in my view, toward greater concentration in the American economy, and if not concentration, then toward the construction of conglomerates which have no real economic reason for existence other than the fact that they can borrow money cheaply? What's happening, in short?

GREATER CONCENTRATION IN MARKETPLACE

Mr. JANEWAY. Take a typical marketplace for whatever—fasteners, forgings, casters, zippers, you name it—in which normally you might have 20 to 50 competitors with the runts in the litter bunched down at the bottom of the marketplace, each accounting for, I don't know, 1 to 4 percent of it. What's happening now is that these industries are being knocked down to under a dozen competitors, and the competitors of consequence are increasingly divisions of corporations with very large cash flows benefiting, for example, from safe harbor leasing.

Not meaning to single anyone out, but General Electric gave a token demonstration of its strength stretching across a broad spectrum of industries by raising its dividend a nickel last week. Well, the nickel is meaningless. But the ability to raise the dividend at all is consequential and significant.

Where you have corporations with large numbers of divisions in any number of marketplaces and those divisions want to stay in good with headquarters and they wind up being 1 of a half dozen instead of 1 of 50 competitors, a consequence of this extermination—of this financial equivalent of the gas chamber process—is that the survivors then say to Mr. Joe Smith, an outlet on the street corner in Wenatchee, Wash.:

> We have examined your account with your former supplier whose business has been handed over to us and frankly, you don't measure up to our standards. We can no longer sell to you. You are going off our books.

The "know-your-customer" rule is being buried and forgotten. In other words, the smaller businesses around the country which never had the money to automate, which never had the money to integrate, which have always lived on borrowings, which have always been on a handshake basis with suppliers who have known them, are finding themselves not only out of credit but out of suppliers. They are being chased off the computer. It is axiomatic that the market consequences of bankruptcies are price increases by the survivors. American Airlines raised its fares right after Braniff went under.

LESS PRODUCT DIVERSITY

This country, with all of its diversity, is not structured for product line after product line to be served by less than a dozen competitors. I think that's what's happening. I suggest that you invite to testify a very distinguished alumnus of the military, Gen. Anton Slay, who was in charge of procurement for many years in the Air Force. He's developed very alarming data showing that defense-sensitive supply industries producing valves, casting, forgings, have now got themselves in such a splintered condition due to this process that if there were to be a shooting match of some kind, the Armed Forces wouldn't be able to get basic components. I think that would add a dimension to your inquiry.

AND FEWER DEALERS

But I think that the governing answer to your question is measured by the sharp shrinkage in the number of entries in marketplaces. Also, we want to remember that plants don't sell goods. They can't sell goods. Plants are not people. People sell goods. All plants, even General Electric's, are structured to sell through dealers. The mortality rate among dealers around this country is horrendous. Chevrolet built its control of the automobile market on its proud boast that you could always be sure of the trade-in value on a Chevrolet because the Chevrolet dealer would always be there. Look at the mortality rate among Chevrolet dealers.

THE REMEDY FOR HIGH INTEREST RATES

Representative Reuss. Members of this committee or many of them at least think they know the remedy for high interest rates. The remedy in that view is twofold.

One, show budgetary responsibility and get the deficit under control—which certainly must mean a meaningful cutback on the rate of increase in military expenditures and a meaningful reduction in the tax forgiveness measures that were passed last year. And second, with the deficit under control in the view of those of us who hold that view, the Federal Reserve must get its monetary policy under control just as Congress and the administration must get their budgetary policy under control. Such a reformed monetary policy would immediately do away with the current 2½ to 5½ percent target which is patently being disregarded by everyone, including the Federal Reserve.

So, let's assume, although it takes quite a bit of assuming, that a sensible budget policy and a sensible monetary policy replace the insensible policies that we now have in those two fields and that interest rates thus do come down. You still would have the other half of your problem, the fact that if the prime rate went from, say, 16 percent to, say, 11 percent of whatever, you still would have a very considerable disparity between the elect and the rejected, not only based on the fact that lenders like the former better and will lend to them cheaper, but also based on the effect of the deduction of interest paid by those who have that which is needed in order to benefit from a deduction; namely, gross income.

Here's my question: What should be done about the Treasury deduction as an ordinary and necessary business expense of interest paid?

TAX BREAKS FOR AMORTIZATION NEEDED

Mr. JANEWAY. I think, if anything, you would panic the economy if you took away the right of deductibility on interest. Mr. Chairman, mine is a very characteristically moderate and optimistic presentation. Let me add a dimension to it which is not so moderate or optimistic.

Let's suppose Adam Smith Everyman were sitting in Milwaukee or in Providence or in Tallahassee or wherever he's sitting. Joe Albritton, the shrewd head of the Riggs Bank, our friend, told me the other day that when a customer comes in and pulls up a chair alongside his desk and says, "Partner," he says, "I know I got a bad loan." Let's suppose the recovery that isn't coming happened yesterday. Let's suppose the fellow who is about to be sold out or who is about to pack it in finds himself showered with earnings again. The banker who has been lending him the interest, suddenly says, "Hey, buster, you owe us $200,000 or $1 million or whatever it is and I see you are earning the interest. I want a pay down."

Now, the moment today's loser who becomes tomorrow's profitmaker is confronted with a demand not merely to pay the interest, but to make an amortization payment, which is reasonable, he has to find $2 of amortization money for every $1 that he finds in interest money. His amortization money costs him $2 on the dollar if he's making money, while his interest money costs him only 50 cents on the dollar once he resumes taking deductions. So his amortization dollar is four times more expensive to him than his interest money.

What I would suggest if we could get back on a track again, and as Jack Kennedy used to say, get the economy moving, I would give people who had had 3 years of losses, let's say, and they will be very easy to find, a tax break on any amortization. I would let them take deductions on any amortization payments they make, else you will break them all over again the moment they get to where they can repay a dollar in order to reestablish their credit and get their interest rate down closer to the prime.

Representative REUSS. What you are saying is that while it is the combination of a high interest rate policy and the deductibility of interest paid which produces the anticompetitive effect which is the subject of your testimony, nevertheless you don't advocate, and I would agree, the laying of hands on the interest paid business deduction. Instead, you would concentrate your corrective action on monetary policy and interest rates?

Mr. JANEWAY. Yes. Also on tax policy to this extent, and I will make another suggestion in a moment, I would give marginal borrowers who are, as I said, credit intensive, some sort of break in the form of deductibility on any amortization payments they made for a couple of years.

TAX REFUNDS ADD TO DEFICIT

While you were making your remarks, I jotted down a small calculation, as to the extent to which we are kidding ourselves. The admitted deficit in the last fiscal year was, I believe, $63 billion. Most of the discussion now about this year's deficit is concentrated on the spending side of the problem. As the result of the collapse in the economy, however, and its spread from merely a sales or income disappointment to a balance sheet disaster, collections are going to pot.

The most dynamic growth indicator in the economy today is refunds. Our friend, Senator Harry Byrd asked me late last year what I thought the deficit would be for this fiscal year, and I said over $125 billion, and he gasped and made appropriate remarks. I asked, "Harry, what would you do? Repeal the refund privilege?" He said heavens no. Refunds in the first half of this fiscal year, Mr. Chairman, ran at $55 billion; annualized, which I think is a reasonable calculation, they run to $110 billion.

Representative REUSS. Refunds of overpaid income taxes? That's what you are talking about?

Mr. JANEWAY. Yes. Refunds running at $110 billion this fiscal year call, in my judgment, for a realistic carryback and add-on to last year's apparent deficit of $63 billion. If you add $110 billion to $63 billion for fiscal 1981, you have—my arithmetic gets so bad as I age—$173 billion adjusted deficit for last year before anything happened to scare you.

THE INFLUENCE OF REAGANOMICS

Representative REUSS. The taxpayers of the country inadvertently contributed enormously to apparent fiscal probity on the part of the Reagan administration?

Mr. JANEWAY. They expressed with their pocketbooks a ringing vote of confidence in the new brand of Reaganomics.

Representative REUSS. Involuntary?

Mr. JANEWAY. They believed it. They bought the prospectus. They thought they would owe the money and they are now recapturing the money at this $110 billion rate with every indication that corporations and individuals alike are still doing this.

For example, a splendid corporation, a model of corporate responsibility, Phelps-Dodge, has now shut down all of it's income earning operation. Every copper mine it has is shut down. Nevertheless, it cut its dividend by half. To pay a dividend, it must pay the Government a tax. If this short term bet proves wrong or wrong headed, and it cuts its dividend altogether next year, obviously it will earn a big refund.

BORROWING TO PAY CORPORATE DIVIDENDS

I think it would be a great economy measure for this committee to get a $1 million appropriation out of its masters and use the money to take a poll of all corporations which are borrowing money to pay dividends.

Mr. Justice Cardozo, in a different world, when he was still on the high court in New York State, handed down a decison which branded the payment of an unearned dividend or the payment of a dividend by a loss corporation as a criminal fraud. That was a different world, subject to a different standard of corporate probity.

But you will find, I think, that the overwhelming majority of American corporations today are borrowing not only to pay their interest, which is understandable, but borrowing to pay their dividends, and that's entirely discretionary. That is building up a tremendous future-year claim on the Treasury. The Treasury will refund all the taxes paid in support of the earnings reported to pay the dividends being financed by borrowers.

So, it seems to me that if we are running at a refund rate of $110 billion this year, we can anticipate next year that we will run—next fiscal year—at a much higher rate of refunds.

So if you add, let's say, to be moderate, which we always try to be, $125 billion for fiscal 1983 to the admitted deficit, let's say, this year of $125 billion, then before we come to the difficult years on the spending side, we will be stuck with a tax adjusted deficit of $250 billion. That's without regard to where spending is going in the next couple of years.

FUTURE MILITARY BUDGET OBLIGATIONS

Now, a point you made about military spending. Before your former colleague, Mr. Stockman, came out of the closest, he persuaded his fellow students in this White House that what matters about the Defense budget is not obligations, but outlays, They have been very inhibited and guilty about outlays. They have been holding outlays, despite all their tough talk, down to the level of the Carter years. It is obligations that they are throwing at the Russians, thinking to scare them with declarations. Mind you, it is a tremendous achievement to collapse an economy while obligating a couple of trillion dollars for futute-year defense. But the really big deficits will come when this administration finally begins to bring to market these huge trillion-dollar scale obligations scheduled to greet the next administration, that is for 1985, 1986. And to have deficits on this scale overhanging the markets, and burdening us with these interest rates in a collapsed economy, suggests that short of our involvement in fisticuffs, we are two-thirds of the way to Argentina now.

MILITARY BUILDUP WITH TAX CUT ALMOST UNPRECEDENTED

Representative **Reuss**. You express lack of enthusiasm about both, the administraion's policy of financing a huge military buildup by reducing taxes and the private sector policy of financing a relatively healthy rate of dividend payments by borrowing.

Mr. **Janeway**. That's right. Mr. Chairman, I have searched the annals for any experience in history, in modern industrial history, of an effort to organize a massive military buildup; that is, a buildup in procurement obligations, while cutting tax rates. I have found—as the lawyers say, I have identified—one near case. It is not precise.

As the history books tell us, Kaiser Wilhelm was a nut. He was very anxious when he knew that World War I was going to start to get in good with respectable opinion. He appointed as his finance minister a triple threat man, the author of the textbook used in all German universities on finance, Karl Helfferich, professor of economics at the University of Berlin and the head of the Deutsch Bank which is still the largest commercial bank in Europe, I believe. Herr Helfferich ran Germany through 3 years of World War I down to the point at which they were putting 14-year-old boys in the mud holes, without any—it is not quite an analogy—income tax whatever. When Karl Leiblinecht, the Socialist deputy subsequently assassinated, cornered Helfferich in the Reichstag in 1917, at which point the German Government was conscripting Belgian prisoners to work in the mines as forced labor, and asked him how long the slaughter would continue with no tax, Helfferich replied that he would not infringe on the liberty of enterprise in Germany. He added that theirs was a just war—this tells us how economists reason, and therefore, to mistrust them—and therefore, Germany would win: A non sequitur that history has confirmed. Helfferich added that when Germany had won she would obligate her vanquished enemies to pick up the tab for her war debt. Out of Germany's wartime monetization of her debt came the destruction of the mark out of which came subsequent events—Hitler, World War II, and so forth.

It is disastrous under the conditions of a 10-year military technology cycle—you then had a 3-month military technology cycle—to contemplate anything but tax increases if you are going to say, as the President said the other day, "I have seen the cables. I am in possession of this intelligence." If you have seen the cables and this is your knowledge and this is your responsibility based on your proprietary knowledge, you must ask the folks to participate in the responsibility. You and I were there when a Democratic liberal President named Roosevelt, and another named Truman, on finding themselves in fisticuffs, raised rates 40-percent overnight—20 for tax, 20 for compulsory withholdings to buy savings bonds. Joe Sixpack regarded the savings bond as a tax, too. And it was. So if we are to stay in obligations for the trillions in the outyears, we must change tax premises.

HOW CAN THE FED GET THE ECONOMY MOVING?

Representative REUSS. Returning to monetary policy, in your judgment, what should the Federal Reserve now do to perform its part in getting the economy moving again?

Mr. JANEWAY. I want to be entirely fair, and that means taking sharp issue with the description of what it is doing. It is said to be pursuing a tight money policy. Many of its critics, most of its critics, think that it is. That is not the case.

It is pursuing an aggressive easy money policy. The Fed is a net buyer, a determined and anxious and almost hysterical buyer day after day. It was a buyer of Government securities in the market—that is, it was pursuing an easy credit policy—on the day last month, on the Wednesday—I forget in which week—that the Fed funds rate went to 31½ percent in after-hours trading. Two tight Chicago banks paid up to 31½ percent that Wednesday. I will be happy for the record to furnish the week.

It is thought, and it may have been the case until recently, that the Fed, as I said, controls the Fed funds rate. It has lost control of that rate to the extent that banks at the other end of the spectrum from those I'm referring to today—the banks that are 85 and 100 percent lent—get in the way of its act and become necessitous users of the Fed funds market. If I had anything to say about it, and there is no danger, I would signal my determination to get the Fed funds rate back into single digit territory and to keep it there.

Representative REUSS. How would you do that?

Mr. JANEWAY. The first thing I would do would be to say it. I would pursue an open-mouth policy. I would stop the deception about tight credit versus easy credit; we have easy credit and high interest rates.

HOW TO REDUCE THE FEDERAL FUNDS RATE

Representative REUSS. But admitting that our concern is with high interest and agreeing with you that 9 percent new M_1 this year is not tight money, it's relatively easy money, how would you at the Open Market Committee go about operating on the Fed funds rate?

Mr. JANEWAY. There are various things you can do. Henry Kaufmann, in his testimony before the House Budget Committee, indicated several which I endorse and which he and I have discussed.

Begin with the premise that the money supply calculation is baby talk. It is irrelevant. You have $200 billion in the money market funds. You have about $170 billion in the commercial paper market. That's a lot of money. You have lord knows how much more in the foreign branches of the banks with oversea connections, the internationally connected banks. The first thing I would do would be to stop the pretense that the money market calculation inside the banking system can be relevant so long as we have these huge pools outside the banking system. So, what I would do would be first to move to protect those banks which are in bad shape. I think the Comptroller may have a list of about 30. I would be a very aggressive buyer at rates calculated to beat the Fed funds rate down under 10 percent on all days. That's the first thing I would do.

STOP CATERING TO MONETARISM

Representative **Reuss**. If I can stop you there, that would result in the growth of M_1 expanding very fast above its present close to 9-percent rate, would it not? I don't say that's the end of the world. I'm just asking.

Mr. **Janeway**. If you figure on what has happened while they were doing what they are doing, you have put $200 billion into the money market funds, 56 percent of whose assets, I believe, are in commercial paper. So you haven't stopped the growth of the money supply by doing that. I would get my mind off the money supply if I had anything to do about it. I would stop catering to monetarism. Monetarism is a more effective instrument of revolution then the KGB.

CUT THE DISCOUNT RATE

Representative **Reuss**. To get back on track, putting to one side bursts and explosions in M_1, you are saying you wouldn't worry about it. You would get the Fed fund rate down to around 10 and keep it there.

Mr. **Janeway**. If I did that, I could then justify a cut in the discount rate.

Representative **Reuss**. To about the same level?

Mr. **Janeway**. Exactly. You asked me before how banks in the 16-percent prime rate market can offer money out at 12 percent. If they ever get caught overnight, they go to the discount window. The next think I would do which, in fairness, the Federal Reserve Board did do, I think last June, would be to waive the requirement that discount paper be paid back in a couple of days.

When the S&L's got into their first big jam, they were invited to come to the window at the Federal Reserve Bank and to park paper not just for overnight. So, I would go to a reasonable term basis in accepting paper from banks on the Comptroller's list. I think if you did that, you would bring down the rate at which the overlent banks are borrowing. Part of that trouble is that the easy credit policy that the Fed is pursuing is helping only those who don't need the money. But it is not helping those who are overtight.

FED SHOULD BUY MORE THAN BILLS

When Martin was chairman and we had that mess which you remember in 1957 when the Government panicked, the Secretary of Defense put out a memorable letter asserting that the Government wasn't going to pay defense contractors what it owed them. The outcome of that flap was that the panic died down when I persuaded then Senator Johnson to lean on Martin until Martin retreated from the "bills-only" policy from which he insisted that the Fed would never retreat.

That's another thing the Federal Reserve Board could do, you see. It could buy more than bills. In fact, when things get bad enough, it does. A good deal of the difficulty, I think, could be eased if the Fed would stop insisting that it will never do what in fact it does do every day.

Representative **Reuss**. To wit?

Mr. **Janeway**. The aggressive credit policy. It's pursuing an easy credit policy. We would be clearer in our minds and the markets would be clearer too, if the Fed said it is. I think we would be in better shape and would avoid another Penn Central affair if the Fed could bring some of this commercial paper back into the banking system. You would get deposits back.

PROBLEM OF COMMERCIAL PAPER

When the commercial paper supplies inflate and the banks are the big issuers, what the issuers are doing is rate scalping, that is bargain hunting. The commercial paper market boomed when rates went up. If you could bring rates down, more money would go back into the banks. The banks would give better grade loans and money would come back out of the commercial paper market. But I think that the Federal Reserve Board probably is not too far away from trying to find a way, and perhaps, from even welcoming a lead from Congress to get off this money supply kick and get back to an interest rate target.

WHY BANK LOANS ARE RISING DURING RECESSION

Could I add this point? We have a condition in which bank loans outstanding are at new highs, steadily rising, and yet in which loan demand for new money is nonexistent. This indicates clearly that the jumps, the successive and continuous jumps in outstanding bank loans are being made for the purpose of borrowing to pay interest. The money represented by the increase in bank loans outstanding is not going into payrolls, it is not going to the purchase of supplies, it is not going into what is technically termed productive loans.

What we need are productive loans. Our need is to use business borrowing to finance business buying. Without business borrowing under our system, there is no business buying. If the Federal Reserve Board brought the rate it can handle down, if it broadened its buying to include term paper, say to Government agency paper, to bring those rates down, if it could get the banks that are in trouble and that habitually use the Fed funds market for intrabank borrowings of a desperate sort, if finally, the Fed could get these troubled banks to where they could again make productive loans, it would remedy the situation.

Getting back to my testimony. As it is now, for a borrower paying 24 percent with no tax relief, in 3 years someone owing $100,000 would owe $200,000 without having borrowed a dollar to meet payroll or to buy any inventory.

MONETARY CORSET DOES NOT MAKE SENSE

Representative **Reuss**. Let me address myself to one element of your testimony, your proposition that the Fed ought to forget M1 and M2 and the rates of growth of the monetary aggregates and concentrate on interest rates, and specifically, on getting the Fed funds rate down to around 10 percent and keeping it there. One can disagree, cannot one, with your sweeping the monetary aggregates from the table and still say that the Federal Reserve ought promptly to get rid of the 2½- to 5½-percent monetary corset in which it has encased itself? Because even if one still partakes of nourishment at the foot of monetarism, it still doesn't make sense to say let's have a 2½- to 5½-percent target, but tell the world that you are kidding it and really you are going to go on creating easy 9-percent money. So in any event, even if one doesn't go the last step with you in saying monetarism is or should be dead, would you not agree that adjustment ought to be made in that 2½ to 5½ percent?

Mr. JANEWAY. Absolutely and minimally. And further, without the Congress getting into matters of administration, I do think that the Board ought to be asked why the commercial paper flow and the money market flow are not included in the calculations so that we know at what rate the increase is actually occurring.

TAX WITHHOLDING SYSTEM HAS FAULTS

There is another aspect to this which bears on my testimony. I testified to this before the Senate Small Business Committee which, of course, has a Republican chairman. We have another malpractice developing, another source of strain, where I think the Treasury, the Federal Reserve Board, and the Congress need to be helpful: the tax withholding system. The tax witholding system obligates the employer to make the withholding payment 4 or 5 business days after the paycheck is issued; right?

Representative REUSS. Not wrong.

Mr. JANEWAY. You pay your folks on Friday and by Wednesday, you are supposed to pay your withholding money. My perception of what is going on in the real world outside the monetary statistics is that these lapses, delinquencies on withholding, are actually financing next week's payroll and paying the telephone bill. So, I think that if we know what is good for us and want to hold back this rate of bankruptcy, we will give the employer who paid *x* in the previous quarter some kind of carryback credit or entitlement before he goes delinquent and criminal or shuts down and fires everyone and makes them a charge on the Government in the next quarter.

That money, I point out, goes through the banking system. The banks are getting the benefit of these deposits from people on whom they are foreclosing loans. How would you feel if you were Joe Blow and you had just met a $5,000 payroll, and the following week, you came up with another couple of thousand dollars, which you had put into the bank which enjoyed the use of this withholding of yours? How would you feel if Friday after that, this same bank bounced your payroll checks after it had the use of your money before it turned it over to the Treasury and bought bills with it the following Monday?

In the real world, it seems to me that the Federal Reserve Board needs to exercise some conscience and responsibility about that because not only are all borrowers not equal, but all meeters of payrolls are not equal.

SAVINGS BOND PROPOSAL

Now, on the broader question, suppose we did something like this. The administration has dug itself into a hard position on personal income tax rates. The Congress is saying that it is fiscally irresponsible to take the 10 percent in the third year. There is a way to finesse the argument, and the Federal Reserve Board could be helpful in this connection. There are so many good ideas around that worked in the past that I fail to see the need for overstraining to improvise new ones.

I'm talking about the war savings bond. I don't see why we need a war to bring back the savings bonds. We have the fiscal equivalent of war in the Reagan military obligational budget: Why do we need a shooting war in order to do what we made work to prevent a wartime inflation twice with Government spending? We need some sort of savings bond; away from the market. When we had the war savings bond——

Representative REUSS. If I can interrupt, the oft-maligned John Maynard Keynes suggested forced savings.

Mr. JANEWAY. That's right, forced savings. But Keynes was such a puritan, such a conservative, contrary to his reputation, that when we adopted his recommendation, we froze the employee into that $18.75 instrument. Depriving him and her of the right to convert it into cash and to pick up a tax deduction by borrowing on it. Money was only 1 percent. Nevertheless, we saved the up-front interest. We gave him $25—I don't mean to be sexist—we gave him and her, her and him, $25 at maturity and we taxed the spread. We taxed the profit, if you want to call it that, from $18.75 to $25 at ordinary income tax, certainly discriminatory against the masses, and for the classes, which Keynes is not normally thought to have been. We did something worse to the war savings bondholder because of Keynes' fiscal puritanism, which I don't share. We froze the bond. We said they couldn't sell their bonds and they couldn't borrow on them.

Suppose we went back to the savings bond to get $50 to $100 billion a year out of it, and suppose this time we made it borrowable. Thanks to everything that's going on, people are gradually discovering the miraculous uses of the long tax form and of interest as a tax deduction. To any income earner, wage or salaried, say that some 16- or even 20-percent rate, if in the 50-percent bracket is exactly as it is to DuPont or to General Electric. It is 10-percent money. It is really cheap money.

Now, suppose you told Joe Sixpack that he was getting his paycheck out of which was coming not only his withholding tax, but also a savings bond. However, the bank that was going to get the withholding also had a terminal where he was working and he could take the savings bond and give it to the bank and get 90 cents on the dollar. He would be ahead in cash and you would be giving the bank reserves that it could park with the Federal Reserve Board. The private sector's excess liquidity could be used to soak up this deficit problem.

INTEREST DEDUCTIONS FOR WAGE EARNERS

I suggest this: if you look at the budget in the large and stop playing this nickel and dime game—which I regret to say that I think many of my good friends in this body have been suckered into doing—there is only one place on the spending side of the budget where you can look for a big number, and that's interest. Interest doesn't buy groceries for the unemployed and it doesn't buy planes for the military. It is not deductible to the Treasury. The savings bond offers a massive method of getting rid of up-front interest and putting that interest and putting that interest over to people who can use the deduction; namely, the work force, what's left of it.

There are plenty of people still there. As the administration says, "there still are more employed than unemployed. What are you kicking about?" [Laughter.]

So, the customers are there. Why not use them? Why saddle this poor Treasury of ours, bereft of deductibility as it is, with the interest drain it can't deduct? Instead, don't tamper with the interest deduction. Endow the work force with it. We calculate in New York City, which is not representative, where we have a 10-percent State tax and a 4-percent city tax, both deductible, that before tax adjustment, we are in a 64-percent bracket as individuals. We figure a single person making $20,000 a year and getting a $25 a week increase, keeps about $8.50 in take-home pay. These brackets are so high now, that if you invited people to borrow on savings bonds that paid no interest up front but that would be collateralizable at the banks, you would give cash flow to the Treasury in the form of money it could keep; you would spread deductions around to the work force; and you would concentrate reserves in the hands of the banks. You would invite the banks to deposit those reserves with the Federal Reserve Board which deserves to keep them. It's earned the right to keep them. And you would free up the funds in the illiquid banks which they are not obliged to deposit at no interest with the Federal Reserve Board to insure their solvency.

Representative **Reuss**. You have given us enough food for thought for many weeks. Certainly not since the appearance here of Admiral Rickover some weeks ago have we had our adrenalin stimulated to such an extent as you have stimulated it. You pointed out that we are embarked upon a military and fiscal course unrivaled since the last days of imperial Germany. You have dealt another blow to the 2½ to 5½ percent M_1 corset in which the Federal Reserve and the administration have encased themselves, pointing out that one doesn't have to believe that monetarism is dead in order to say that even for a monetarist such a corset is untenable.

PRESENT MONETARY TARGETS "DISASTROUS"

Mr. **Janeway**. May I make a technical point? I know the 2½ to 5½ calculation weighs heavily on your mind. In the money market fund, when you elect to cash in money you have in a fund, what compounds the mockery of the present statistical system is that the money market fund's distribution repayment back to the holder goes through the banking system.

Representative REUSS. So there is a tremendous whiplash?

Mr. JANEWAY. Yes. It goes through the banking system. It simply isn't counted as going through the bankng system.

Representative REUSS. What you are asking, and check me if I am wrong, is that you and I did not make the M_1 category. The Fed did. But having made it and having promised the world that it would stick to a 2½- to 5½-percent target range, then to violate it grossly in the execution contributes markedly to the monetary mess that we are in.

MONETARIST DOGMA NEEDS TO CHANGE

Mr. JANEWAY. It is disastrous. When Friedman first promulgated the doctrine that the money supply is currency in circulation plus checking accounts, and we were invited to trust the free workings of the free market to do the rest, he grossly discounted the flexibility and ingenuity of the free workings of the free market system.

But monetarism has never caught up with what the market has done to its definition of the money supply. Monetarism doesn't keep pace. I will say that the classical economist of the 19th century who followed Smith did adjust theories to changed conditions. But the monetarists have frozen their dogma and show no disposition whatever to do that.

In terms of the Federal Reserve Board's claim to be independent of the executive, I'm enormously relieved, and I congratulate you on having made history in your interchange with Chairman Volcker. I think the Chairman's acknowledgment of the authority which the Constitution mandates in this body is a Magna Carta. But the fact is that monetarism, not the supply-side snake oil business, is in charge in this administration.

The Under Secretary of the Treasury for Monetary Affairs would like to see a situation created in which the executive gets crowded out of the market. The Federal Reserve Board has been catering to monetarism because it has been catering to the executive. If you can give the Fed a declaration of independence from the executive and an Emancipation Proclamation to follow policy guidelines formulated by Congress under its constitutional mandate, you can free the executive from its present exposure and in time to move us out of the very dangerous position we are in because the depression that is developing is close to the panic point.

Repersentative REUSS. Well, I end as I began by suggesting that just as it is a great mistake for the administration and Congress to adopt a budgetary fetish and then not stick with it because that spooks the markets, so it is an equivalent mistake for the administration and and Federal Reserve to embrace monetarism and then not stick to it, because even if monetarism were right, if you adopt a theology and don't stick to it, of course you alarm the votaries. We are grateful to you, Mr. Janeway. We could go on here for many more more hours, but we have a distinguished panel awaiting. I want to thank you once again for appearing before us and come back and instruct us again soon.

Mr. JANEWAY. This record would not be complete if I were not to express my profound despair by your announcement of your retirement.

Representative REUSS. Well, lest this love feast get out of hand, thank you, and I ask Professor Nichols, Professor Renshaw, and Mr. Roberts to come forward. I want to thank you three eminent witnesses for your patience. However, I feel that the show put on was not a dull one.

Gentlemen, your prepared statements will be made a part of the record.

Mr. Nichols, you may proceed.

STATEMENT OF DONALD A. NICHOLS, PROFESSOR OF ECONOMICS, UNIVERSITY OF WISCONSIN, MADISON

Mr. NICHOLS. It is a pleasure to appear here. Let me say I appreciate the weather. This is Wisconsin weather. I lived here several years and never experienced this.

I have a rather wide-ranging prepared statement that covers many broad issues of strategy. I want to concentrate on just a few issues that I think are of great concern to the committee at the moment. One of these issues is the question of expectations and how they are changed by a change in policy. A related issue is the question of the policy strategy choice itself.

SHOULD WE STABILIZE POLICY INPUTS OR OUTPUTS

I want to contrast two different kinds of policy strategies, one that emphasizes what I call the inputs of the policy process, stabilizing budgets and money growth rates, and another strategy that stabilizes the outputs of the process—inflation, unemployment, real growth. The policy has always been a blend of these two, but I see us moving over the past decade more toward stabilizing the inputs away from stabilizing the outputs, and I see economic performance getting worse. I am recommending a change in that strategy.

The punch line of my prepared statement, which I must summarize here, is that the economy desperately needs lower interest rates and I think the way to bring them about is to create more money.

There are two extreme possible kinds of strategies. One, stabilizing the inputs, stabilizing money growth rates and the budget—entrusts the private economy to stabilize itself. The private economy sets unemployment and inflation through a variety of competitive markets. The other strategy chooses a set of goals for inflation and unemployment and adjusts the policy inputs to hit those goals.

The distinction between those two strategies is probably clearest when we find a situation where the economy is not working the way we forecast it to work, where suddenly there is a glitch in our calculations. One strategy says what we will do since we are not hitting our goals is to change our policies because our goals are what are anchored, that we are trying to stabilize. The other strategy says that since we are anchoring our instruments, what we will change is the forecast.

We have seen that happen now for a couple of years—successive revisions of the forecast as the chosen policies have not brought about what we anticipated.

I'm recommending what should be changed is not the forecast, but the policies themselves.

EXPECTATIONS ISSUE

Now to the issue of expectations. Expectations has been emphasized by those who favor rules, who favor stabilizing money growth rates. It has been given by the Federal Reserve as a reason why they cannot increase money growth at the present time. They know that more money and credit would bring down interest rates in the short run, but they are afraid that their provision of this money and credit would be misinterpreted by the markets, particularly that this would lead to inflation and the markets, in anticipation of the inflation, would raise long-term interest rates today.

Let me argue that this issue of expectations is very complicated. It is poorly understood. There are many views of how expectations are formed not only within academia but also within Wall Street. It is wrong to think that Wall Street has a unanimous unified response to every change in Federal Reserve policy. They are very confused about how to interpret Federal Reserve policy—what the effects are on interest rates—and it is wrong to buy one extreme position of how expectations can influence economic activity.

THE DANGER OF OVEREMPHASIZING EXPECTATIONS

This overemphasis on expectations that we see today in policy is not new. This is not the first time that policymakers have fought themselves into a corner, paralyzed their own ability to act. The Great Depression, from Milton Friedman's account of monetary policy in the Depression, was made much worse by the Federal Reserve's unwillingness to bail out the private banking system and their unwillingness to bail out banks as these banks were crashing. Their unwillingness to pre-fund was because they were afraid that that would signal that they recognized that the banking system was unsound and needed help. They sat there and let successive waves of bank failures take place that made the Great Depression much worse, turned it into a financial catastrophe in addition to the Depression that we started with. Milton Friedman says the lesson we learn from this is to use policy rules rather than discretion. It was the discretion of the policymakers that caused the problem. Had they been relying on rules, they would have pumped in more money.

I argue that a lesson to be learned is that we can overemphasize our pursuit of expectations as a policy goal rather than real economic phenomenon, and that we have the danger of paralyzing ourselves and preventing ourselves from acting when acting is needed.

To see how complicated the expectations issue is and that there are several possible ways to interpret it, let me contrast two oversimplified ways in which policy might be conducted.

One is the monetarism system. What if we had always held money growth at 4 percent? What if we had done that for the past 30 years rigidly as the monetarists recommend? Presumably inflation would be lower, but I think output growth would have been more unstable than it has been over the past. In that world, if the Fed then raised their money growth rate from 4 to 5, that would be a devastating signal to the markets, and the markets might well respond with a higher forecast of inflation with an increase in interest rates rather than a reduction in interest rates.

Let's move to exactly the opposite world and think about a different history. Let's assume that they have expressed as an objective the control of inflation and set a 3 percent target. If inflation is over, above 3 percent, they adjust. Let's assume that they have maintained this policy for 30 years. Under that policy, inflation would have averaged 3 percent. Therefore, the sensible forecast for the future is a forecast of 3 percent inflation in the future. If in that world we see the Federal reserve increase the rate of money growth, expectations should not be changed. Expectations should still be for a 3 percent inflation rate into the future despite the fact that the Federal Reserve has destabilized the rate of money growth. We would have a history of unstable money growth. There would be no signal from an increase that it wouldn't be reversed as it had been reversed in the past.

The point of this exercise is that the expectations that should be inferred from a change in Federal Reserve policy depend on the overall strategy that's being followed. It depends on these two extreme examples, we have a very different predictive response of expectations.

That raises the question of which world we live in. We live in a mix of these two worlds. The Federal Reserve claims they are looking at just the inputs, the money supply growths, but in fact we know that we have to look at the outputs.

STABILIZING MONEY GROWTH IS A CREDIBLE POLICY GOAL

This committee is worried about unemployment and high interest rates. This hearing is evidence of that. Certainly if unemployment got up above 10 or 11, there would be pressure of the Fed to abandon this policy. It is wrong for the markets to believe that the money supply growth is going to be stabilized regardless of what happens to be the economy. We are not going to allow the Great Depression to be repeated while we hang on to the inputs. So, it is not a credible policy and therefore it is wrong to think that the markets respond as if it were, that the markets respond the way they did in that extreme monetarist example that I just laid out for discussion. They do not respond that way. They should respond as if it were a blend of these. The exact mix is a complicated issue to compute. I cannot tell you what the exact response of the markets would be. But it is going to be less than those extreme monetarists tell you it is going to be.

Don't interpret my remarks, please, as saying that I don't think expectations are important. I think they are extremely important. But I'm saying we don't understand them well. We are just learning about them. They have been the subject of enormous research for the past decade, as this committee is surely aware. I'm saying we should direct policy toward controlling things we do understand rather than the things we don't.

This reminds me of when my children first started school. I went to one of my first PTA meetings and we had a new young teacher who had us sit around on the floor in the classroom and choose our goals for the coming year. This was before return to basics was a popular strategy. But I said mine were the three R's. I would take them to the zoo. She didn't have to do that. She suggested goals like giving them a positive self-image. Now, I have to admit that the acquisition of a positive self-image is a valuable thing. If in fact, if she promised she could do that for my children, I would be happy to teach them the three R's. But I suspect that after a year of devoting herself to giving my children a positive self-image, not only would they not know how to read and write, but they probably wouldn't have a positive self-image, either.

FED SHOULD EXPAND CREDIT TO LOWER INTEREST RATES

I suggest that the Fed supply the credit that we know is needed at the moment. We know this can bring down real interest rates in the short run and we are not sure of what its long-term effects are on inflationary expectations. By directing ourselves to something we don't understand, we run the risk of missing on both of these targets. So, I favor printing more money. I think that will bring down interest rates. If it must be done within the money growth target, so be it. I would be happy to take more money at the present time.

But I think this emphasis on fixed targets has been a bad one—that is, this trend toward emphasis on targets. We never get a pure policy of rules as opposed to discretion. But I think this has been a bad trend.

MORE FLEXIBLE POLICY WOULD IMPROVE ECONOMIC PERFORMANCE

We have heard the argument that printing more money would now be a return to the way we have done things for the past 40 years, and wouldn't that be a disaster. Mr. Janeway is not the only one who can cite history. The past 40 years are the best ones we have had in our economy in terms of real growth, in terms of the stability of that growth. In terms of inflation, the 1970's have been bad, but this is this period when we have been having partly a reliance on rules and partly a reliance on discretion, partly looking at the outputs, partly stabilizing the inputs of the process.

I cite in my prepared statement how this has taken place since 1975 with no apparent increase in economic stability as a result of that. I'm emphasizing the year-to-year growth rates, December to December, not the short-term ones which I will agree have been more volatile recently than they were previously. Looking back at 1947 to 1972, there was a period without external oil shocks, where money growth was much less stable than it is in the post-1972 period, but where the economy performed very well. I would say if this printing of new money now, this abandonment of fixed growth rules as a guide to policy, sets us back to the way we used to do things, that would be wonderful. I think everyone would like the performance we had in the 1947 to 1972 period. If we had a chance of getting that back, I would favor it.

So, my summary is print more money. That will bring interest rates down. What happens to expectations, we cannot be sure. The Federal Reserve should make clear what its long-run objectives are for money growth and inflation. As long as it is consistent in its statement about what those long-run objectives are, there should not be a rise in inflation as a result. Thank you.

[The prepared statement of Mr. Nichols, together with an appendix, follows:]

PREPARED STATEMENT OF DONALD A. NICHOLS

Summary

Interest rates are too high. The difference between the market interest rate and inflation -- called the real interest rate -- is at a record high. These high rates are the source of many of the economic problems we now face.

- High interest rates are restraining those sectors which rely heavily on borrowed money -- residential construction, agriculture, capital investment, holders of inventories and durable goods industries.
- High interest rates have raised the value of the dollar to an inappropriate level making it unnecessarily difficult for American firms to export or to compete in the domestic market with cheap imports.
- High interest rates, combined with the recession they have caused, have damaged the balance sheets of many corporations making bankruptcies more probable and the possibility of a financial collapse more likely.

These high interest rates can be traced directly to the inappropriately tight monetary policies being followed by the Federal Reserve. Inflation was temporarily out of hand a few years ago and it was appropriate then for the Federal Reserve to rein it in with a tightening of the money growth rate. But now with the economy in the third year of a major recession, with bankruptcies threatening many sound firms, and with the worst of the inflationary surge squeezed out of the economy, it is inappropriate to continue an extreme anti-inflationary monetary policy regardless of its devastating effect on the economy.

Recent policy has been backwards in its emphasis on stabilizing the inputs of the policy process -- money growth rates and budget deficits -- rather than the outputs -- real growth, inflation and unemployment. The ludicrous effect of this posture is that our response to bad news about the implications of our policies is to change our forecast rather than our policies. For too many years we have been changing our forecasts, postponing our estimate of the date of recovery and reducing our estimate of its strength.

We are now trapped by the same mentality that made the great depression so long and so deep -- by a belief that tight money will make people think we are following sound policies and that the thought of soundness alone will somehow stabilize the economy automatically. Well, it won't. It is time to stop designing our policies to change the way people think about the future and instead to design them to permit people to act in the present.

Accordingly, I recommend

- That the Congress in its budget message choose an economic forecast that is the best they think the economy can accomplish in terms of growth, unemployment and inflation and that once they are convinced these goals are jointly feasible that they direct both monetary and fiscal policies to attain them. This means in particular that Congress should not take as given an extremely tight monetary policy when choosing the economic forecast on which the budget estimates are to be based.
- That an appropriate monetary policy to request from the Federal Reserve is one in which short term interest rates are reduced substantially. I view 8 percent as an appropriate short-term interest rate at present.

- That Congress direct the Federal Reserve to pay more attention in forming its long-run policy objectives to the ultimate goals of policy -- inflation, unemployment and real growth -- and less to the proximate or operating goal of a fixed growth rate for the money supply.
- That Congress direct the Federal Reserve to pay more attention when forming its short-run policies to interest rate stabilization than it has in the recent past. We need not only lower, but more stable interest rates.

I. Introduction

Many issues divide the economics profession today. I will emphasize one of the most important and I will refer to it many times in giving answers to a series of questions about the appropriate course of monetary policy for the coming years. That issue concerns the making of policy according to a fixed set of rules rather than through the use of the discretion of the policy authorities.[1]

Briefly, one strategy for making policy is to choose a set of rules that fix the policy instruments regardless of the state of the economy. For example, one might ask that the budget be balanced and that the money supply grow at a constant geometric rate. This strategy tries to stabilize the inputs to the policy process -- the policy instruments themselves -- and relies on natural forces in the private economy to stabilize the outputs of the policy process, which are inflation, unemployment and real growth.[2]

Another strategy sets goals for the outputs and then chooses the budget and money supply best suited to achieving those goals. This strategy involves destabilizing the inputs of the policy process in order to offset the natural tendency of the outputs to fluctuate. This strategy relies on the ability of policymakers to change the inputs quickly and on the ability of the inputs to change the outputs quickly.

The economics profession is divided on this issue because they disagree on the amounts of time it would take to stabilize the economy using discretion as opposed to the time it would take for the economy to stabilize itself. While it is convenient for descriptive purposes to draw these competing strategies in extreme form, past policy has been a blend of rules and discretion and many economists, myself included, would recommend that a blend be maintained in the future as well. The question is not whether a pure strategy of rules is better than a pure strategy of discretion, but how much the current policy mix should be moved toward a further or lesser reliance on discretion. While the trend in policy in the last decade has been away from the discretionary mode and toward the rules mode, I will argue that this has brought about a worsening of economic performance and that what is needed in the future is an increase in discretion and a relaxation of the rules.

My policy recommendations are divided into two parts (1) a section that deals with the need for an immediate expansion of the money supply and what the likely effects of such an expansion would be and (2) a section that discusses overall stabilization strategies. These sections are followed by a section that recounts the recent history of the move toward policy rules and away from discretion and how those moves have not been followed by improvements in economic performance.

II. Money Growth Rate Recommendations

Q.1. Should Congress Ask the Federal Reserve to Raise Its Money Growth Targets?

Yes.

The projected rate of growth for M1 is 2½ to 5½ percent per year. This is too low to permit a recovery from the current recession. For the past 20 years, the growth of GNP (in nominal terms) has on average exceeded the growth of the money supply by a little less than 4 percent per year. That excess, which can be called the growth in velocity, combined with money growth at the midpoint of the Federal Reserve's range -- 4 percent -- would permit GNP to grow at only 8 percent per year including inflation. Yet the forecast the Administration submitted with the budget called for economic growth of 10.4, 11.0 and 10.0 percent respectively for the years 1982, 1983, and 1984.

The Administration's economic forecast is now recognized as being unrealistic and is being scaled back. But the reason it is unrealistic is precisely because money growth is expected to be insufficient to support it. Rather than change the forecast to recognize the depressing effect of tight money, I would recommend changing the rate of money growth to support a more reasonable rate of recovery. For several years now the official forecasts have been wrong, and we have to ask for how long we should keep revising the forecasts before we decide that it is the policy that should be scrapped rather than the forecast.

There is no reason the Congress should have to take the Federal Reserve's arbitrary numerical growth targets as given when making its own economic forecast as part of the budget process. The Administration's economic forecast that appeared with the 1983 budget was widely viewed as irresponsible because it was not consistent with the Federal Reserve's money growth targets. Admittedly the Administration claimed to support the Fed's targets. But the forecast should not be thought of as an irresponsible set of goals for the economy. The average real growth rate for the next four years was set at a modest 4.9 percent. The unemployment rate even at the end of that period was projected to remain above 6 percent. Inflation was projected to average 5.5 percent and to be below 5 percent by the end of the period. These goals are not irresponsible in relation to the ability of the economy to produce or in terms of their internal consistency. They are only irresponsible as a forecast if one must take as given the chosen policies of the Federal Reserve.

The right way to make policy, to my mind, would be to ask the Federal Reserve to support these goals as its own. As the Committee well knows, the Humphrey-Hawkins Act requires the Federal Reserve to report to Congress how its own expected actions relate to the goals chosen by Congress. There is no implication that Congressional goals are subordinate to the monetary policies of the Federal Reserve; rather it is assumed that the Federal Reserve is a part of the policy making team. Accordingly, the economic goals should not be chosen as a forecast of the best that can be accomplished taking announced Federal Reserve behavior as given. Rather they should be chosen as the best that can be accomplished if the Federal Reserve also does its best to help reach the goals. The Administration's irresponsible forecast noted above provides a more responsible set of goals, to my mind, than what would happen if the Federal Reserve were permitted to carry out its announced policy. With adequate monetary growth, the Administration's economic forecast would not be irresponsible.

How much money growth would be needed to reach the economic growth targets set in the budget? Here I would defer to the Fed. As I noted, 4 percent is an average rate of growth of velocity in the past but there have been substantial fluctuations around that average. However, if we use that average and combine it with the GNP forecast mentioned above, growth rates of 6.5, 7.0, and 6.0 would be appropriate for the midpoints of the ranges set for M1. But institutional changes are proceeding quite rapidly in the financial sector and the Federal Reserve may well have good reasons for choosing different money growth rates as a way of reaching the same economic targets. It is clear, however, that only a very pessimistic set of economic goals is consistent with the current Fed policy of a growth rate range centered on 4 percent. The unemployment rate will remain above 6 percent until the late 1980s if current policies are continued.

Q.2. Wouldn't an Increase in the Money Growth Rate Cause Inflation to Increase?

Yes, but the important question is by how much.

The central proposition of monetarism is that in the long run, increases in the price level will be roughly proportional to increases in the money supply.[3] This proposition is widely accepted as a rough approximation by economists of all views. But this acceptance does not mean that money and prices are directly linked in the short run nor does it imply that the best monetary policy in the short run is the one with the lowest money growth rate.[4]

An extreme branch of Monetarism has occasionally argued that the link between money growth and prices is immediate, or delayed only by the length of time it takes the private sector to learn about the policy changes (and about any other structural changes the economy may be experiencing.)[5] Indeed, if this extreme view were correct, we would not have had the recent severe recession in response to the low rates of monetary growth. The leaders of traditional Monetarism, it should be noted, have taken great pains recently to emphasize that the short run effect of tight money is indeed a recession and that only in the long run will it bring down inflation.[6] This should disassociate them from the Administration's irresponsible forecasts of 1981 and from the radical claims of the extreme Monetarists who argue that large reductions in inflation are possible without major recessions.

This raises the question of how fast the money growth rate should be reduced to a noninflationary level. How large a recession should be endured for how long in order to bring inflation down? In this context, it is easier to understand my recommendation for a temporary increase in the money growth rate even though I recognize that inflation will be higher with this increase than without it.

I think that current policy is overly ambitious. Money growth has been reduced too quickly and a major recession has been caused. A modest relaxation of the money growth targets would ease the recession significantly and the modestly higher price level that would accompany this relaxation is a price I would be willing to pay. Long run inflation goals need not be abandoned simply because a modestly slower approach to them is adopted.

Q.3. Would the Recommended Increase in Money Growth Rates Bring Interest Rates Down?

A. Yes.

The Committee is probably aware that there is little agreement on this issue. The problem is that an increase in the money supply sets in motion two forces that work in opposite directions on interest rates. The question then becomes which of these two forces will dominate.

We can think of interest rates as being comprised of two parts, a premium for anticipated inflation and a real net-of-inflation interest rate. Monetarists emphasize that an increase in the money supply would increase the inflationary premium while non-monetarists emphasize that it would reduce the real interest rates. Both arguments will be summarized briefly.

While one can find disagreement among economists on virtually any issue, for purposes of this debate we can assume there is agreement on the core of the monetarist argument which is that 1) A permanent increase in the rate of growth of the money supply of one percent above what it would otherwise have been would lead in the long run to an increase of one percent in the inflation rate; and 2) a permanent increase in the actual and anticipated inflation rate of one percent would lead to an increase in long-term nominal interest rates of one percent. We can also assume, for purposes of argument, that the expectation on the part of the public that the rate of growth of money is being increased permanently by one percent would cause current rates of interest on long-term assets to increase immediately reflecting the fact that these securities would have to compete in the future with short term securities floated at the higher futuge short-term rates.

There would be disagreement whether a short term increase in money growth would necessarily trigger expectations that the higher growth rate would be maintained and, therefore, whether a short-term increase in money growth would trigger an increase in long-term interest rates.

And there would be disagreement -- even within the monetarist camp -- over the proposition that a short term increase in the money supply would lead to an immediate increase in short-term inflation and, therefore, in short-term interest rates. Moderate monetarists would probably side with the non-monetarists in expecting only a gradual effect on inflation from a change in money growth rates though they might differ in their estimates of the speed of response.

Non-monetarists would emphasize the sluggishness of the underlying, or core, inflation rate that depends heavily on the rate of wage inflation. They would argue that a short term increase in the money supply of one percent would lead to much less than a one percent increase in inflation. Thus the real money supply --the money supply divided by the price level -- would be increased, and this would cause real interest rates to fall. Estimates of how much they would fall vary, but a conservative estimate would be that real rates might come down immediately by three percentage points for a one percent increase in the money supply. Greater effects are possible.

If we grant that inflation does not respond immediately to changes in the money growth rate -- as the moderate monetarists would grant -- then there will be a short-run effect on real short-term interest rates of an increase in the money supply. Thus we have two effects working in opposite directions and we return to the question, which will dominate?

It is useful to remember the two bones of contention in examining the possible answers: (1) The speed of response of inflation, and (2) the effect of short-term monetary expansion on expectations of long-term monetary expansion. Let us consider these issues one at a time. If inflation responds immediately to changes in the money supply, real balances would not rise and real interest rates would not fall. The inflationary premium would rise, of course, and so would interest rates. If, at the other extreme, inflation does not respond to changes in the money supply, real balances would rise and real interest rates would fall. Nominal interest rates would fall by the same amount as real interest rates since the inflationary premium would be unchanged. Thus the speed of response of inflation is one key to the different predictions given by monetarists and non-monetarists.

Virtually all empirical research indicates a lagged response of inflation to changes in money growth albeit with the length of the lag varying.[7] Thus complete agreement does not exist on this issue, but there is agreement that the response is lagged. The dynamic adjustments are too complicated to summarize easily so I will use here a simplified example of the adjustment process whose length is not a misleading representation of the literature but whose pattern is oversimplified. I will work out an example of the relative size of the two offsetting effects on interest rates under the assumption that an immediate one percent change in the money supply would cause an increase in inflation of one quarter of one percent for each of the next four years. This would represent a quantitative compromise between monetarist estimates of a somewhat faster response and non-monetarist estimates of a somewhat slower response.

Consider the effect of a one-time increase in the money supply of one percent that is not expected to be repeated. In this case the effect on inflation, we have agreed, is an increase of one-fourth of a percent above what it would otherwise be for the next four years, after which time, the real money supply would have been restored to its original level. Interest rates would have an increase in their inflationary premium by one-fourth of a percent for those four years.

The increase in the money supply of one percent would at the outset be an increase in real balances and would cause the real interest rate to fall by three percent. This effect would be steadily eroded over the four years with real rates being down 2¼ percent after one year, 1½ percent after 2 years, 3/4 percent after 3 years and 0 after four years. Combining this decline in real rates with the increase in the inflationary premium, we would get a net decline of 2 3/4 percent in nominal rates at the outset, etc. Thus in this example, real and nominal rates would be reduced for several years by the one-time increase in the money supply.

The effect would be strengthened if there was a simultaneous offsetting move in fiscal policy. With fiscal policy being tightened, there need be no effect on inflation, and thus no offsetting inflationary premium. Furthermore, without an inflationary response, the increase in money supply would represent a real increase that would not be offset over the course of four years by price increases. Thus, in this case, real and nominal rates would fall by three percent immediately and would stay down. Both long and short rates would fall.

The effect would be weakened if the public viewed the one-time increase in the money supply as a permanent increase in the rate of growth of the money supply. That is, if they took it as a signal that a further one percent would be added next year and a further one percent the year after, etc. Then, except for the temporary adjustment period, long rates would rise by one percent reflecting the expected increase in long-term inflation. Rates for the very short-term still fall since the effect on real interest rates of the increase in the real money supply would be larger for a few years than the increase in inflation, but this effect would be temporary.

With three possible sources of variation in the effectiveness of the monetary change in interest rates, it must seem as if I'm waving my hands and hedging my bets. But the real uncertainties can be substantially reduced. First, as I noted, a lagged response from inflation is generally accepted. The large-scale econometric models all provide estimates of those lags and an average of their estimates would provide a basis for a policy calculation. My crude four year adjustment is not a bad intuitive guide to the size of the lag. Second, Congress has it in its power to set fiscal policy. Thus a tightening of the budget that is adopted simultaneously with an easing of the money supply would magnify the effect of the monetary change on interest rates.

The third variable is expectations. This is an area of great controversy and turmoil at the moment within academia. Accordingly, it appears as an area of uncertainty to the Congress. But the nature of expectations is greatly influenced by the policy strategy being followed. If, indeed, the Federal Reserve is following a rule of a constant rate of growth of money, an extra increase in the money supply may be taken as a signal that the growth rate has been increased and interest rates would rise. (This is a reason why I recommend below the abandonment of the money growth rule as a strategy.)

If, on the other hand, the Federal Reserve's policy strategy is to support the economic goals adopted by the Congress, then the money supply increase has no significance other than pointing out what I noted above, namely, that there will not be enough money to reach a reasonable set of goals unless current policy is abandoned. So long as the Fed makes it clear it will restrain the money supply if inflation gets above the target, then long-term inflationary expectations should be dominated by the economic goals, which, to make the policy credible, must represent a feasible set of outcomes for the economy. If the Fed were to make clear that its strategy is to provide the money supply necessary to reach these goals and to restrain the money supply if the growth and inflation goals are exceeded, the forecast would then provide an anchor for long-term expectations and we would not observe large changes in interest rates with every wiggle in the money supply.

Since announced changes in policy strategy may not be credible, we can ask what is the most likely response of interest rates today to a one-time increase in the money supply even if we can't guarantee that the public will believe there has been a switch in strategy? What does current behavior tell us about their likely response?

I feel that interest rates would fall in the short-run if a policy of limited increases in the money growth rate was followed. In fact, I feel they would fall substantially. This view is representative of a large portion of the economics profession as seen in the models described in the major textbooks and as seen in the behavior of the large scale econometric models.[8] Interest rates are high at the moment not because of expectations of future inflation but because of expectations of inadequate money growth. Surveys of expectations show that consumers anticipate an inflation rate of about six percent. Expert forecasts indicate even lower inflation rates are in prospect for the immediate future.[9] Current wage agreements also reflect the belief that inflation will be near 6 percent for the next few years. That short term interest rates can remain near 15 percent on one year money when inflation rates of 6 percent or less are anticipated can only mean that real short term rates are amazingly high. It is these rates that are sensitive to short-run expansions of the money supply.

The diagnosis for long-term interest rates is harder to make but I would support the same analysis I used for the short term. We know that long-term interest rates fluctuate with short-term rates and that the fluctuations are greater than our theories predict should be anticipated on the basis of fluctuations in the short-term rates alone.[10] One possibility that cannot be dismissed is that the long and short-term interest rates are more closely linked than our sophisticated theories imply they should be.

We know that much long-term saving is done through short-term instruments. The recent legislation for Individual Retirement Accounts has caused much saving for retirement (long-term) to be placed in 6 month to 30 month instruments. Mortgages (long-term borrowing) are commonly issued with fluctuating short-term interest rates. Firms have switched their borrowing from the long-term market to the short-term market, possibly in anticipation of a decline in long-term rates. With so many long-term saving and investment objectives being accomplished in the short-term market, it is possible the markets have become one despite what our sophisticated theories imply. If this is the case, an easing of monetary policy, even on a short-run basis, would bring long interest rates down along with the short rates. This is what I expect would happen.

A decline in long rates is desperately needed. I'm sure the Committee has heard from its constituents in many of the hard-pressed interest-sensitive sectors. I do not personally follow the financial status of individual corporations, but the aggregate data on sales, profits, and short-term indebtedness indicate many must be in a risky position and their very existence would be challenged by several more years of high interest rates and sluggish growth. I cannot give a prediction in terms of numbers of bankruptcies to be anticipated if current policies are maintained, but the risk of a major catastrophe is there. This is a foolish risk to run since a catastrophe would greatly complicate the job of getting out of recession.

Even without a collapse the longer we keep interest rates high the more damage we are doing to corporate balance sheets and the less quickly corporations will be able to respond to a decline in interest rates when one eventually comes. If enough corporations are battered into a defensive position financially, investment will be slow to recover even when recovery comes.

Short-term rates can be brought down by a monetary expansion. Such a reduction is needed.

Summary of Part II

In summary, an expansion of money growth rates to permit a more rapid recovery from recession is in order. This would make inflation modestly higher in the short-term but it would make unemployment substantially lower. No long run increase in inflation is anticipated. The increase in money growth would have its major effect on the economy by lowering interest rates. Current surveys and forecasts indicate that expectations of inflation are not high and that what is keeping interest rates high is tight money. The lower interest rates are necessary to help many sick sectors and companies recover from what could become a major disease. I would suggest an interest rate near 8 percent as a current target.

The Congress should choose an economic forecast as part of its budget process that embodies a reasonable rate of recovery. They should require the Federal Reserve's opinion as to the feasibility of that forecast if sufficient money is available. Once convinced the growth path is feasible Congress should require the Fed to support it with adequate increases in the supply of money.

III. Stabilization Strategy Recommendations

The last section discussed policies to reduce interest rates. This section considers policies to stabilize them. Both are important, but given the need for immediate action in reducing interest rates, the recommendations in the last section were described within the context of the existing monetarist policy framework. In this section the choice of framework is considered.

The objectives or targets of policy are conventionally classified in three groups: (1) ultimate targets, such as inflation or unemployment; (2) proximate targets, such as the annual money growth rate or an interest rate target through which the ultimate targets are pursued; and (3) operating targets, which are the weekly or inter-meeting instructions to the trading desk. I divide my discussion in these three ways.

Q.4. What should be the ultimate targets of monetary policy?

A. Full employment, price stability, real growth, and an equitable distribution of income.

All of these goals are important and all should be pursued. Obviously the goals will occasionally conflict and the ability to get more or less of any one of them at the expense of the others varies from time to time with the course of the economic cycle and with the nature of the particular disturbances that may affect the economy from time to time. I see no need to rank these goals nor a need to require the Federal Reserve to follow some formula that sets down for all time a system of weights that describes their relative importance. I think it would be difficult to anticipate with a single formula the many possible kinds of shocks that could hit the system that might change the rankings momentarily. Accordingly, judgment should be used in the choice of policy to pursue these goals and the policies should be changed when new circumstances or new information warrants.

Clearly, this recommendation runs counter to the prevailing Monetarist fashion in two fundamental ways. (1) I recommend the use of discretion by policymakers rather than adherence to fixed rules; and (2) I recommend that monetary policy pursue other goals in addition to price stability.

The current monetarist views became fashionable in part with the acceptance by the profession of the concept of a natural or equilibrium rate of unemployment. I contributed, myself, to the development of the concept.[11] But I interpret the recognition of the existence of the natural rate of unemployment to mean that we acknowledge that we cannot arbitrarily choose a full employment target. A three percent unemployment rate, for example, would be widely viewed as irresponsible because it would lead to accelerating inflation. This does not mean that it is impossible to stabilize the economy around the natural rate. Put differently, left to its own devices, the economy would fluctuate around a natural equilibrium. We have found that monetary policy cannot in the short run change that natural equilibrium, but this does not imply that it is impossible or inappropriate to reduce the amplitude of the fluctuations around it.[12]

The current situation is an excellent case in point. The unemployment rate is now 9.4 percent. No one views this as a long run equilibrium. Most would grant that monetary expansion would help at least temporarily to reduce that rate and that a reduction would move the economy toward its long run equilibrium rather than away from it. Not everyone would agree that such a move would be desirable.

Monetary policy is but one of the tools available for pursuing the ultimate goals. The other major tool, fiscal policy, should be coordinated with monetary policy in a joint pursuit of these goals. The choice of which goal monetary policy should pursue depends importantly on what fiscal policy is trying to do.

At present, for example, a Congressional budget that tightened beyond what current policy would imply could be offset by a move toward lower interest rates by monetary policy. The same output and inflation forecasts could be met but with lower interest rates and, therefore, a better distribution of the burden of the fight to reduce inflation. Prospects for investment and long-run growth would also be better.

Q.5. What should be the Proximate Targets of Monetary Policy?

A. Stable growth of monetary aggregates, stable interest rates and a smoothly functioning, capital market should all be pursued, and the relative importance of these targets should vary with circumstances.

There is no doubt that price stability cannot be attained if the money supply is permitted to grow without limit. This fundamental long run constraint must be recognized when choosing shorter run targets. This does not mean that money supply growth must be the short run target, but at a minimum it means that past and expected money growth must affect the choice of an interest rate target and the process through which that target is revised.

While I emphasized my preference for discretion over rules in the pursuit of the ultimate targets, the case for a rule becomes stronger when we move to proximate targets and stronger yet for operating targets. The reason for the existence of these shorter targets is because we don't observe the longer run targets as frequently and because it takes time for the ultimate targets to be affected by changes in policy instruments. While waiting for these effects, shocks can hit the system and the question of how to respond to these shocks can be specified in the form of a short-term policy rule. The longer the time period over which policy is being set, the more important is the use of discretion. For short period policies, a rule is acceptable.

With the single instrument of monetary control, one cannot guarantee that both an interest rate and a money growth target can be hit though, in general, either one of them can be hit. Alternatively, one could restrict his misses of both targets to lie in a particular relation to each other.[13] For example, one could require that for each percentage point by which the interest rate target is exceeded, the money growth target is also exceeded by a half percent. The absolute size of both errors cannot be controlled simultaneously, but their ratio can be.

Too often the choice of a proximate target is restricted to that between a monetary aggregate and an interest rate. But the basic technical result in the field is that in most cases the optimal policy will require a pursuit of both targets, and the amount by which each target is to be missed should depend on the nature of the shocks expected to hit the system.[14] The larger are the shocks anticipated from the financial system itself the more importance should be given to stabilizing interest rates while the larger the shocks emanating from the consumption, investment or export sectors, the more importance should be given to stabilizing money growth. Since in general, disturbances can be expected from both groups of sectors, optimal policy will generally require a partial pursuit of both targets. Table 1 reproduces the basic data on money growth from the most recent Economic Report of the President. Table 2 shows the changes in the Dec/Dec rates of growth of M1, the year to year changes in the average 30 day T-bill rate and the year to year changes in inflation and real growth rates. From Table 2, it appears that there was a significant move toward stability of money growth rates around 1974 or 1975. This corresponds to descriptions by participants within the Federal Reserve of a move toward controlling monetary aggregates and to the passage of Concurrent Resolution 133 in March 1975 requiring the Federal Reserve to specify its objectives and to describe its past actions in terms of monetary aggregates.[15]

The year to year variation in money growth rates fell by more than half after 1974 or 1975 compared to what it was before. Interest rate variability more than doubled. The ratio of interest rate changes to money growth rate changes rose from less than 0.5 before 1975 to above 2.5 after. This ratio provides a good index of the extent to which the Federal Reserve Board followed monetarist policies in its pursuit of its proximate targets.[16] Whereas it recently would permit a 2.5 point increase in interest rates before letting the money growth rate increase by 1.0 point, it previously would tolerate less than a half point change in interest rates for the same change in the money growth rate.

This ratio is also a concise way to provide a stabilization strategy recommendation. Here is one. Once interest rates have been brought back to a more reasonable range -- say to the rate of core inflation plus a few points -- future stabilization could follow a rule where the ratio of interest rate changes to money growth rate changes is constrained to be somewhat less than one. This could lead to far more interest rate stability than recently, yet far less than in the 1960s. If future experience using this ratio proves successful, I would recommend moving the ratio back down to one-half.

Table 2 also shows the variability of inflation and real output growth. These have increased or stayed the same despite the switch to monetarism (depending on whether the switch is dated as having taken place in 1974 or 1975.) Thus economic performance has gotten worse since the move to monetarism While I feel that the challenges to policy have also been greater recently, and that, therefore, a comparison of the raw data on output and price variability alone provides an unfair test for monetarism, the monetarist strategy was adopted in the first place precisely because of a worsening economic performance due to external events. It seems only fair to make it shoulder some responsibility now for the worsening economic performance that has accompanied the adoption of monetarist methods by the Federal Reserve.

I listed a smoothly functioning capital market as a proximate target. Well functioning capital markets facilitate investment and real output growth. It is my opinion that the wide swings in interest rates we have seen recently have hurt the long term capital market. Interest rate variability has made both borrowers and lenders less willing to take long term commitments. High interest rates have threatened the financial security of many companies and increased the probability of a financial collapse. Financial stability should be one of the proximate goals of monetary policy and at the present time a pursuit of it would require both lower and more stable interest rates.

Thus the goal for the Federal Reserve for the next twelve months should be a reduction of short-term interest rates to a level equal to core inflation plus a point or two. This will probably require money growth at a rate of 7 or 8 percent for the next year.

Q.6. What should be the Operating Target of Monetary Policy?

A. The federal funds rate.

An operating target is a short-run inter-meeting guide to those who manage the trading desk in New York. An operating target answers the question, if interest rates rise today, should the rise be offset?

I do not believe that the choice of an operating target is as important as that of the proximate target nor is the choice of the proximate target as important as that of the ultimate objectives to pursue. Famous monetarists agree.[17] This is not surprising because monetarism's main strictures refer to the long run. If money growth gets out of hand in the long run, we get inflation. If it is highly variable in the short run we do not.

Thus, as a general rule, I would suggest that the shorter the time horizon for the policy target being set, the less importance should be attached to the stability of the money growth rate. Over the decade as a whole, stability of money growth is extremely important, but over a week it is irrelevant.

On the other hand, the case for interest rate stabilization is stronger the shorter the time period being considered. It is the shocks to money demand coming from the real economic cycle that should be stabilized with fixed money growth rates the academic literature suggests.[18] Shocks that come from changes in payment patterns, in the temporary distribution of funds or in financial innovations should be stabilized by keeping real interest rates constant. The important thing to note is that the real economic shocks seem to come in cycles of several year's duration while the financial shocks come daily in response to changes in payment patterns. Thus the short run shocks are far less apt to be real than financial and therefore they should be treated as financial and not permitted to disrupt the system.

For this reason I recommend that the operating target be an interest rate rather than a monetary aggregate. Previously, I had noted that the shorter the time horizon, the more practical it was to ser policy targets in terms of rules rather than by discretion. Accordingly I would recommend that the operating target be a fixed interest rate set by the Board in its instructions to the trading desk.

The recent interest rate instability shown in Table 2 is inter-year. The adoption of a monetary aggregate as an operating target in October 1979 has also led to greater intra-year instability. This was necessarily the case, as monetarists will admit, because the desk could only choose to pursue one target at a time, and stabilization of the money supply precluded stabilization of interest rates.[19] (The desk must either be a net buyer or seller of securities). Admittedly, the credit controls of March 1980 introduced an enormous shock into the system that may have increased the variability of interest rates in this period more than we could expect in the future if the operating target remains a monetary aggregate. But whatever our estimate of its size the intra-year interest rate instability serves no purpose other than to stabilize the money supply. It has disruptive effects on the real economy affecting employment and interest sensitive industries, and it capriciously redistributes large amounts of wealth on a weekly basis, the stakes of which are so high that short term interest forecasting has become a major crapshoot for some of the best brains in the country. These real costs could be avoided if the system would return to the use of an interest rate as an operating target. The extra instability in the money growth rates that would result on an intrayear basis would have no destabilizing effects and would not preclude the system from continuing to use money growth rates as proximate targets. That, after all was their practice from 1974 to 79, and the table shows substantial stabilization of money growth rates over that period.

Q.7. Does the Fed need new procedures to get better control of the economy?

A. No.

It is true that contemporaneous reserve accounting and a penalty rate at the discount window would give the Fed better control over unborrowed reserves in the extremely short run.[20] It is also true that with the variety of reserve requirements on different kinds of deposits and with the lag in reporting of some banks, exact control of the money supply will be impossible. But exact control in the short run is not important. As noted interest rate stability is more important in the short run than is money control. In the long run, where money control matters most, the Federal Reserve already has the capacity to accomplish its objectives.

Of far greater fundamental importance to the Federal Reserve's ability to control the economy is the fact that the gradual move toward the payment of market interest rates on money is reducing the impact on the economy of changes in the money supply. Thus it is the effect of changes in the money supply on the economy that is important and that is being reduced, not the ability of the Federal Reserve to control the money supply.[21] Another way to view this trend is as a movement to permit checks to be written on assets other than checking accounts. NOW accounts are savings accounts, for example. Money market mutual funds permit checks to be drawn on securities accounts, and now some brokerage firms permit checks to be drawn on an account that includes the equity in a house.

The growth of these accounts will weaken the Fed's ability to control the economy. They may also increase the variability of the link between money and the economy making the monetarist strategy less effective in controlling output than it was. While there will still be some discretionary moves that could be taken to stabilize output in the new world, they will require larger doses of the weaker medicine then available.[22] Clearly, the monetarist strategy of a constant money growth rate will have a lesser and lesser effect on the real economy as the rate of interest on money approaches that on other assets.

Despite this loss of control, I would favor the continued deregulation of financial markets. We cannot predict what practices will evolve but maybe after the dust has settled on the new regime some new regulation will suggest itself that permits greater control. Even if one does not, interest rate stabilization will still be a potent strategy since the threat posed by the new regime is greater to a strategy of stabilizing the monetary aggregates than to one of stabilizing interest rates.

Summary of Stabilization Strategy Recommendations

Short run control of the money supply is unimportant for the monetarist agenda or for any other agenda. Short run interest rate variability is not desirable, however, and this suggests that the short run operating target should be a market interest rate.

The academic literature on stabilization provides little support for a strategy of pure monetary stabilization or pure interest rate stabilization but suggests instead a mixed strategy. History shows us that mixed strategies have, in fact, been followed with more attention being paid recently to money stabilization than before. Yet the literature tells us that the greater are the shocks emanating from the financial sector the more attention should be devoted to interest rate stabilization. And recently, deregulation and technical progress in the financial sector have made it a greater source of shocks than before. Thus I conclude that policy should be turning toward the control of interest rates rather than the money supply, which is exactly the opposite of what is happening.

Because short run shocks are likely to be financial rather than real, the longer the time period for which policy is being specified the more emphasis should be placed on controlling monetary aggregates rather than interest rates. The ultimate objectives, however, include not only a stable price level (rather than a stable money supply), but also a stable level of employment and real output. And if the stabilization of real output requires destabilization of the money supply, the output objective should still dominate.

IV. The Amazing Record of the Economic Policy Debate in the Last Decade

In this last section, let me confess my amazement at the course of economic policy over the last decade. First, I am amazed at the willingness of the public and its leaders to experiment with radical, possibly dangerous, but certainly untried, new approaches to policy. I am amazed at the steady sequence of decisions that have been taken to predetermine policy actions by a fixed set of rules rather than through the use of discretion, and that further steps continue to be taken in this direction despite the worsening of economic performance we have seen after each of the past steps. For a decade we have made things worse by devoting more and more attention to the inputs of the policy process and less and less attention to the outputs, and even now that we have gotten the economy in a terrible state we are told to ignore it and to take even further steps toward controlling the inputs.

Let me recount. It was in the early 1970s that the Federal Reserve moved internally toward the consideration of money growth rules as a proximate target for monetary policy. By 1975 Congress had formally required the Federal Reserve to discuss its policy objectives and its past performance in terms of money growth rates. Table 2 shows how stable money growth has become since then.

But as we all know, despite this increased stability in money growth, economic performance got substantially worse, and what is particularly interesting, less stable. This is also shown in Table 2. Then in October 1979, the Federal Reserve's operating procedures were changed in an attempt to control unborrowed reserves on a short term basis. Interest rates rose sharply and reached alarming levels six months later. Rather than interpret this as a natural effect of the new procedures and a predictable effect of tight money, it was interpreted at the time as a lack of faith in existing policies. In response, an attempt was made to balance the budget though that failed because of the recession caused by the tight money.

Yet this record of mismanagement, which I attribute to an overly aggressive pursuit of balanced budgets and arbitrary money growth targets, was attributed by candidate Reagan to the opposite -- to a lack of attention to the inputs to the policy process and to an over attention to the outputs. He accused policymakers of seeking a "quick fix," by which I presume he means the use of discretionary expansionary policies in the face of recessions.

Now after a year and a half of an even more aggressive emphasis on the policy inputs, and of a refusal to change those inputs in the face of a possibly dangerous performance from the outputs, we sit here discussing alternative strategies for the future. And still we hear people telling us to move to contemporaneous reserve accounting and a penalty rate at the discount window so we can stabilize money growth on a short term basis, as if our massive problems could be solved by smoothing the weekly fluctuations in the money supply. We have other people calling for a return to the gold standard and we have before us an ominous proposal for a constitutional amendment to require a balanced budget. The adoption of those proposals would get us to the extreme pole of a reliance on policy rules and it would get the economy into a worse fix than it is in now.

When I look at the record of a steady shift toward policy rules, and when I look at the record of worsening economic performance that has accompanied that shift, it does not square with the rhetoric I hear in the policy debate. Somehow, the monetarists, or the proponents of rules, have been able to absolve themselves of all responsibility for this history despite the fact that the history has been a mixed one with monetarists having an important, though not exclusive, influence on it. Despite this influence, which has grown steadily for a decade, and despite the fact that the desire to balance the budget shackled Keynesian discretionary policy even when Keynesian policies were at their peak of influence, Keynesians have been given full responsibility for the entire last forty years of policy. I am amazed.

Let me close with an alternative evaluation of the past forty years:

- Policy has always been based on a mixture of rules and discretion, of money control and interest rate control, of monetary actions and fiscal actions. It is the relative importance within that mix that has changed.
- The mix became distinctly more monetarist in the mid-1970s. Certainly no non-monetarist would condone the interest rate gyrations we have seen since then.
- Economic performance was best in the 1947-72 period, a time when policy emphasized the control of interest rates, countercyclical fiscal policy and the use of discretion.
- In fact, performance in the 1947-72 period, was, in most respects, the best in this century. Economic growth was higher and more stable, and the holes in the social safety net were steadily reduced. We've heard that an expansion of the money supply now would be a return to the way we did things for the past 40 years. Well, it would be a return to the way we did things in 1947-72, the best period economically in our history.

- The only blot on the economic performance of that period was an acceleration of inflation in the late 1960s, because a large military buildup was not accompanied by a tax increase. Even so, the highest rate of inflation for that period was a six percent rate in 1969.
- Performance has worsened since the move toward monetarism. From this we can conclude either that monetarism leads to a less stable economy, or that the outside economic shocks of recent years have been substantially greater than in 1947-72. I suspect that both are true.
- But certainly, if it is uncontrollable external shocks that are causing our problems, we should not blame the problems on the policy makers or on the policy strategy now being followed or on the strategy that was followed back when we had no problems.
- And if it is the policy strategy of recent years which is at fault, we should recognize the important role monetarism has played in forming that strategy. A rejection of that strategy would not require a move to constitutional balanced budgets, but would require a reversal of the recent drift toward an emphasis on the inputs of policy rather than on the outputs.

Conclusion

A one sentence conclusion is that this economy desperately needs lower interest rates now, and that the way to bring them about is to expand the money supply.

Table 1

MONEY STOCK, CREDIT, AND FINANCE

TABLE B–61.—*Money stock measures and liquid assets, 1959–81*

[Averages of daily figures; billions of dollars, seasonally adjusted]

Year and month	M1	M2	M3	L	Percent change from year or 6 months earlier [3]		
	Sum of currency, demand deposits, travelers' checks, and other checkable deposits [1] (OCD)	M1-B plus overnight RPs and Eurodollars, MMMF shares, and savings and small time deposits [2]	M2 plus large time deposits and term RPs	M3 plus other liquid assets	M1	M2	M3
December:							
1959	141.2	297.1	298.3	388.0			
1960	142.2	311.7	313.7	402.9	0.7	4.9	5.2
1961	146.7	334.4	338.3	429.5	3.2	7.3	7.8
1962	149.4	361.7	368.7	465.0	1.8	8.2	9.0
1963	154.9	392.0	402.9	502.4	3.7	8.4	9.3
1964	162.0	423.4	438.7	538.9	4.6	8.0	8.9
1965	169.6	457.9	479.1	583.0	4.7	8.1	9.2
1966	173.8	479.2	502.9	614.6	2.5	4.7	5.0
1967	185.2	524.4	556.5	668.0	6.6	9.4	10.7
1968	199.5	567.1	606.2	731.7	7.7	8.1	8.9
1969	205.9	588.6	611.4	762.6	3.2	3.8	.9
1970	216.8	626.4	672.9	814.2	5.3	6.4	10.1
1971	231.0	711.1	771.1	900.7	6.5	13.5	14.6
1972	252.4	803.2	879.5	1,020.3	9.3	13.0	14.1
1973	266.4	859.8	977.9	1,140.3	5.5	7.0	11.2
1974	278.0	908.0	1,060.4	1,246.0	4.4	5.6	8.4
1975	291.8	1,024.4	1,163.0	1,373.5	5.0	12.8	9.7
1976	311.1	1,169.4	1,302.3	1,528.9	6.6	14.2	12.0
1977	336.4	1,296.4	1,462.5	1,722.7	8.1	10.9	12.3
1978	364.2	1,404.2	1,625.9	1,936.8	8.3	8.3	11.2
1979	390.5	1,525.2	1,775.6	2,151.7	7.2	8.6	9.2
1980	415.6	1,669.4	1,965.1	2,378.4	6.4	9.5	10.7
1981 [p]	441.9	1,841.2	2,187.2		6.3	10.3	11.3
1980:							
Jan	392.7	1,538.7	1,792.0	2,175.3	5.6	7.7	9.2
Feb	396.9	1,553.4	1,811.5	2,199.5	6.6	7.9	9.4
Mar	396.7	1,559.6	1,819.1	2,210.9	5.4	7.1	7.9
Apr	391.0	1,553.6	1,817.5	2,218.8	2.0	5.7	6.6
May	391.3	1,568.2	1,833.5	2,232.1	1.3	6.8	7.8
June	394.9	1,589.3	1,852.6	2,246.6	2.3	8.6	8.9
July	399.3	1,614.0	1,873.6	2,264.4	3.4	10.0	9.3
Aug	406.9	1,633.4	1,897.4	2,291.3	5.1	10.6	9.7
Sept	411.8	1,644.9	1,912.8	2,309.0	7.8	11.2	10.6
Oct	416.3	1,654.0	1,928.3	2,326.0	13.4	13.3	12.6
Nov	419.1	1,668.5	1,951.0	2,355.6	14.7	13.2	13.2
Dec	415.6	1,669.4	1,965.1	2,378.4	10.8	10.3	12.5
1981:							
Jan	419.2	1,680.8	1,989.3	2,408.7	10.2	8.4	12.7
Feb	421.2	1,695.7	2,009.1	2,433.6	7.2	7.8	12.1
Mar	425.7	1,718.4	2,027.0	2,445.1	6.9	9.1	12.3
Apr	433.3	1,737.7	2,045.7	2,457.4	8.3	10.4	12.5
May	431.3	1,743.2	2,060.7	2,479.9	5.9	9.2	11.6
June	428.8	1,749.3	2,079.0	2,502.8	6.5	9.8	11.9
July	430.1	1,760.1	2,094.0	2,519.4	5.3	9.7	10.8
Aug	432.8	1,777.2	2,117.5	2,550.8	5.6	9.8	11.1
Sept	431.8	1,786.8	2,133.7	2,574.4	2.9	8.1	10.8
Oct	433.0	1,798.9	2,144.2		−.1	7.2	9.9
Nov	437.9	1,824.7	2,168.9		3.1	9.6	10.8
Dec [p]	441.9	1,841.2	2,187.2		6.2	10.8	10.7

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[1] Net of demand deposits due to foreign commercial banks and official institutions. M1 differs from the sum of components presented in Table B–62 by the amount of demand deposits held by thrift institutions at commercial banks that are estimated to be used in servicing thrift OCD liabilities.

[2] M2 differs from the sum of components presented in Table B–62 by the amount of demand deposits held by thrift institutions at commercial banks.

[3] Monthly percent changes are from 6 months earlier at a compound annual rate.

Note.—See Table B–62 for components.

Source: Board of Governors of the Federal Reserve System.

Table 2

	Change in Money Supply Growth Rate (M1)	Change in Inflation Rate (CPI)	Change in Interest Rate (90 day T-bill rate)	Change in Real Economic Growth
1961	+2.5	-0.6	0.8	0.4
1962	-1.4	+0.4	0.5	3.2
1963	+1.9	+0.4	0.4	1.8
1964	+0.9	+0.4	0.4	1.3
1965	+0.1	+0.4	0.7	0.7
1966	-2.2	+0.9	1.5	0
1967	+4.1	-0.6	0.4	3.3
1968	+1.1	+1.0	1.7	1.9
1969	-4.5	+1.3	1.4	1.8
1970	+2.1	-0.2	0.6	3.0
1971	+1.2	-2.1	2.1	3.2
1972	+2.8	-0.3	0	2.3
1973	-3.8	+3.0	5.4	0.1
1974	-1.1	+0.8	3.4	6.4
1975	+0.6	-2.1	5.2	0.5
1976	+1.6	-0.8	2.2	6.5
1977	+1.5	+2.8	2.0	0.1
1978	+0.2	+2.0	2.2	0.7
1979	-0.9	+2.8	4.3	1.6
1980	-0.8	+1.5	0.9	3.4
1981	-0.1	+2.5	3.5	2.1
Avg.				
1961-74	2.1	1.4	0.95	2.1
1974-81	0.8	2.9	2.1	2.1

Appendix: An Index of Monetarism

An index of monetarist sentiment is developed here. It is based on the assumption that the monetary authorities wish to stabilize both interest rates and the money supply at prevailing levels. Shocks to the system prevent them from stabilizing both simultaneously, and they are forced to choose between them. The monetarist index is derived from the record of the past choices they have made.

I assume a simple money demand function

1) $$M_t = a_t - bi_t$$

where a_t follows a random walk. The problem faced by the monetary authorities when a rises is to determine whether to increase M (and keep i constant) or to stabilize M (and force i to rise). The relative importance the monetary authority places on stability of M versus stability of i can be expressed formally in the quadratic loss function 2). The larger is g relative to h, the more monetarist is the authority having this function. If the authority is concerned only with interest rate stabilization, g will be zero, while if he is concerned only with money stabilization, h will be zero. Thus the ratio of g to h provides an index of monetarist sentiment.

2) $$L = g(M_t-M_{t-1})^2 + h(i_t-i_{t-1})^2$$

g and h are not observed, but if we assume the authority tries to minimize the loss function 2), their ratio can be inferred. That minimization is shown in 3).

3) $$L = g(M_t - M_{t-1})^2 + h(i_t - i_{t-1})^2 - \lambda(M_t - a_t + bi_t)$$

$$\left.\begin{aligned} \partial/\partial M_t &= 2g(M_t - M_{t-1}) - \lambda = 0 \\ \partial/\partial i_t &= 2h(i_t - i_{t-1}) - \lambda b = 0 \end{aligned}\right\} = \frac{i_t - i_{t-1}}{M_t - M_{t-1}} = \frac{g}{h}\, b$$

Thus the unobserved index of monetarist sentiment g/h is proportional to an observed index, the ratio of interest rate changes to money supply changes. With some changes in dimension, this is the index cited in the text that increased from less than one-half before 1975 to more than two and one half after 1975.

Footnotes

1. Early statements in favor of policy rules are Simons [1936] and Friedman [1948].

2. See Lucas [1980] for a modern statement of this position.

3. This position dates at least to David Hume whose 1752 essay "On Money" can be found in the Rotwein edition of Hume [1970].

4. My views on monetarism and current policy are developed further in Nichols [1982], a piece written for the National Policy Exchange. This testimony summarizes parts of that paper and expands on other parts.

5. This view, often associated with the term "rational expectations", is explained further in Nichols [1982].

6. See, for example, Friedman [1982] and Meltzer [1982].

7. For example, see Barro [1978], Geweke [1980] and Gordon [1981].

8. Macroeconomic textbooks would include Dornbusch and Fischer [1981] and Gordon' [1981].

9. See the survey of professional economic forecasters conducted jointly by the American Statistical Association and the National Bureau of Economic Research as reported in Zamowitz [1982]. A forecast of minus 3.4 percent is given for 1981-82 and minus 0.1 percent for 1982-83.

10. See, for example Shiller [1979] and Singleton [1980].

11. The modern statement of the natural rate of unemployment is due to Phelps [1967] and Friedman [1968]. My own contribution was in the "Phelps volume," (Nichols [1970]).

12. For more on this issue, see Nichols [1982].

13. The basic reference is Poole [1970]. See Santomero and Siegel [1981] for an extension.

14. See Poole, [1970].

15. See Solomon [1982].

16. See the Appendix for a development of this index.

17. See Friedman [1982].

18. See Poole [1970].

19. See Rasche [1982], p. 137.

20. See Rasche [1982] and Santomero [1982].

21. See Tobin's Nobel prize speech, reprinted in Tobin [1982].

22. See Tobin and Brainard [1963].

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Representative **Reuss**. Thank you, Mr. Nichols. Next, Mr. Renshaw.

STATEMENT OF EDWARD F. RENSHAW, PROFESSOR OF ECONOMICS, STATE UNIVERSITY OF NEW YORK AT ALBANY

Mr. **Renshaw**. Frank Morris, president of the Federal Reserve Bank of Boston, has noted that the use of monetary aggregates as targets for monetary policy rests fundamentally on the assumption that the relationship of the aggregates to nominal GNP is relatively stable and predictable. Morris believes that financial innovations raise serious doubts as to the validity of this assumption.

CONGRESS SHOULD END MONEY GROWTH TARGETING

His doubts are shared by Anthony Solomon, president of the Federal Reserve Bank of New York. My own research supports their concern, and leads me to conclude that Congress should withdraw its endorsement of monetary targets. I also believe that the Federal Reserve should be assigned an important role in helping to revitalize thrift institutions that have been financially impaired by the Fed's disinflationary policies.

I have assembled a set of tables beginning with a table 3 which are available for the press. Do you have one, sir?

Representative **Reuss**. Yes, I do.

Mr. **Renshaw**. I thought it might be useful if I confined my remarks to these tables and tried to illustrate the important points that seem to emerge from them.

Representative **Reuss**. That's table 3?

Mr. **Renshaw**. That's the first one.

Representative **Reuss**. Without objection, the supplementary material consisting of a group of tables, and your prepared statement with accompanying papers entitled, "What Should the Federal Reserve Stabilize," "Money Versus a Supply-Side View of the Inflationary Process," and "Monetary Policy, Inflation, and the Aggregate Accelerator Principle," shall be included in the record. Did I name all of them?

Mr. **Renshaw**. That's right.

Representative **Reuss**. Proceed.

POLITICAL PARTIES ARE RESPONSIBLE FOR ECONOMIC PERFORMANCE

Mr. **Renshaw**. The first table is a red herring, but it raises an important issue, that of accountability. The question this addresses is whether political parties are held responsible by the electorate for their economic performance. And the data strongly suggests that they are in the sense that when consumption is increased at a rapid rate, an above average rate in the 4 years prior to the election of a new president, there has been a strong tendency for the voters to stick with the incumbents and not rock the boat.

The only two exceptions to this are very unusual in that they both were characterized by a split in the incumbent party. In 1912, for example, Theodore Roosevelt ran against Howard Taft and split the Republican vote and allowed Wilson to win. Again, we had a phenomenon similar to that in 1968 when George Wallace split the Democratic vote and allowed Nixon to win.

When the economy hasn't been performing well enough to provide an above average amount of consumption, there has been a strong propensity for the electorate to take a chance on a new party, and they have been consistently doing that in the post-World War II period.

When we speak of monetary targeting the issue is also that of accountability, I think—targeting out of a belief or judgment on the part of many economists and financial analysts that the Fed had not been doing a very good job of managing the financial money supply. This assertion raises a larger issue of how does one determine whether monetary policy has been good or bad? Part of the answer, it seems to me, is to examine the behavior of both money and short-term interest rates relative to the inflation rate and other variables such as wages and the growth of real output which we would like to control. We begin to do this in table A, the second table in the series titled, "Monetary Policy, Inflation, and the Growth of Real GNP."

RECESSIONS ALWAYS PRECEDED BY ANTIINFLATION MONEY POLICY

One of the most disturbing aspects of monetary policy in the post-World War II period is the extreme volatility of the monetary growth rate relative to the inflation rate. This point is illustrated in column 3 by subtracting the average annual growth rates for the implicit price deflater in real GNP from column 2 from the rates in column 1. It will be noted these differences are rather cyclical in character and that most of the differences are in excess of 2 percentage points. They vary widely and both in a positive and negative manner. The suspicion is that such volatility may have helped to perpetuate business cycles. This suspicion is confirmed to some extent by the average annual growth rates for real GNP in column 4.

In the years following, years when the money supply was not allowed to grow as rapidly as the implicit price deflater, for GNP, we have had rather lackluster growth rates for real GNP. The data in this fourth column on real GNP indicate that there hasn't been an economic recession in the post-World War II period that wasn't preceded by an antiinflationary slowing of the monetary growth rate below the growth rate for the implicit price deflator, and that except for the military buildup years in 1951 and 1966, there has always been a recession following the implementation of such a policy.

ECONOMIC GROWTH MUST BE ABOVE 2 PERCENT TO PREVENT RECESSION

Table C is a very interesting phenomenon that might very well be described as the great black hole of economics—to take a cure from physics. When we examine the distribution of average annual growth rates for real GNP, there are very few cases of growth rates in the moderate range of zero to about 2 percentage points. In the last 50 years, there were only two cases, 1959 when the economy was in a mild economic recession and 1957, just before we got into the economic recession of 1958. This constitutes a bimodal distribution of real growth rates and it's an important hazard of monetary policy notably that for the economy to perform fairly well, it must be allowed to grow at a fairly brisk pace.

INVESTMENT FALLS WHEN GROWTH IS BELOW 2 PERCENT

This is an important idea that can perhaps better be understood by invoking the idea of the Accelerator Principle. In table B, the third table, I presented a little model which shows that since the Korean War, the average annual growth rate for fixed investment has been equal to three times the average annual growth rate for real GNP minus a constant term of 6 percentage points. This relationship implies that real GNP must increase by about 2 percentage points just to keep real investment from falling. When real investment falls, that can very well tend to shove or cause the economy to slide into an economic recession.

One of the chief problems we have experienced lately is that the monetary growth rate has been held so low that it hasn't allowed enough opportunity for growth of real GNP to get above this critical threshold of 2 percent, and hence we have had back-to-back recessions, which I think can be blamed in good part on a rather restrictive type of monetary policy.

The important implication is that the Fed really doesn't have a lot of ability to control the growth of GNP. I believe it is unwise under these circumstances for the Fed to follow a hyperactive monetary policy in which one first allows the money supply to grow very rapidly in the early phases of a business cycle, and once the economy has built up an inflationary head of steam, to then slam on the monetary growth brakes and in effect push the economy back into another economic recession. The belief that an activist monetary policy has done more harm than good has caused many economists, especially some notable monetarists, to advocate a policy of either letting the money supply grow at a constant rate or gradually slowing its growth rate in the hopes that this will slow the inflation rate.

STABLE MONEY GROWTH WON'T STABILIZE THE ECONOMY

However, there is not very much evidence to support the idea that a stable growth rate for the monetary aggregates will necessarily have highly desirable results. Table 1 indicates that the Fed has not allowed the aggregate growth of M_1 to fluctuate nearly as much since the Arab oil embargo as was the case from 1961 to 1973. The average differences in column 4 of table 1 are clearly much less. They are less than half as large on the average on an absolute basis as was the case before the oil embargo. Yet, if we look at the variables we would like to control, notably real GNP and the implicit price deflater, you will note that the absolute average differences for both are larger since the Arab embargo than before it.

Just stablizing the growth rate doesn't imply magical results or good economic performance of the kind we would like to see. The reason is, it seems to me, that there has been a host of financial innovative which have tended to destablize the relationship between the growth of money and the variables we would like to control. On the back of the first table 1 there is another table titled, "Annual Growth Rates for Various Definitions of the Money Supply and Their Usefulness in Predicting the Average Annual Percentage Change in Nominal GNP in the Following Year." One of the most intriguing properties that the monetary aggregates used to have was that they were of some value as economic forecasters. Some of them have been included in the Bureau of Economic Analysis list of 12 leading economic indicators.

If we look at the growth rates for M_{1B}, for example, which has now been superseded by a new M_1, the differences in growth rates are relatively small and related to the inclusion in M_1 of traveler's checks. So that there wouldn't be much difference between these numbers and the new revised monetary aggregate that the Fed is using at the present time.

MONEY GROWTH USED TO PARALLEL REAL GROWTH

It used to be the case that we could predict fairly well the following year's growth in nominal GNP in column 5 of this table by simply adding an expected growth of about 3.4 percentage points to the annual growth of M_{1B} in the preceding year to allow for a fairly steady increase in its velocity. In terms of forecasting errors for this model in column 6 associated with M_{1B}, you often got good forecasts with errors of less than one percentage point. Prior to 1975, there were only four errors in excess of 1 percent.

BUT NOT ANY MORE

It was this stability that gave rise to the idea that if we could control the growth of the money supply and keep it rising at a steady rate, it would probably mean more stable growth of nominal GNP and hopefully a more stable growth of other variables that we are more concerned about, notably real GNP and the inflation rate. However, since 1975, the error terms for M_{1B} are very large. There are only two instances in which these error terms are less than one-half. The implication is that there is no longer a very stable relationship between GNP and M_1 which the Fed is now using as a guide to monetary policy.

Indeed, one of the most surprising aspects to the growth of M_{1B} is its very rapid accelerated growth on an annualized base of about 9.2 percent in a 6-month period ending April of this year. A 9.2 percent, when we compare it to the annual growth rates in column 1 of table 1, compares very favorably and is almost exactly equal to the 9.2 percent growth rate in 1972, which was the highest for any year in the post-World War II period. Why M_1 is growing so rapidly now is very much a mystery. Whether it will continue to grow as rapidly in the future is also something that I think we have to consider to be highly uncertain.

Under these circumstances, it is very questionable whether growth rates for M should be accorded much significance as a basis for formulating monetary policy. It is quite clear that the Fed has been essentially ignoring the growth of M_1 this year in managing the money supply and has probably been focusing its attention more importantly on broader aggregates, M_2, M_3, and L. These also have defects which I don't want to go into now at this time.

PROPOSAL TO STABILIZE REAL INTEREST RATES

But rather, I would like to make the point that economic theories suggest that if the demand for money is unstable as it has been in the last decade and is likely to remain the case in a world of financial innovation, it is probably better to stabilize the real rate of interest than the growth in the money supply. If the problems associated with the monetary aggregates are appreciated, I believe there must be more attention paid to real rates of return on short-term assets of exceptional quality.

LOW REAL RATES ASSOCIATED WITH PROSPERITY

In table 2, we measure a real rate by first subtracting from the average yield on 3-month Treasury bills the average percentage increase in hourly earnings in the private nonagricultural industries. The real rate is shown in column 3. You will note that in the period from 1959 to 1970, a period in which we had one of the most prolonged business expansions in the post-World War II period, during this period of general prosperity real rates were remarkably stable in the sense that they were all close to zero based upon what was happening to real wages. Since 1970, however, there have been wide swings in real rates based on earnings.

If you turn over table 2, there is another table 2 that looks at and calculates real rates on a more conventional basis in which we compare the average yield on 3-month Treasury bills with the inflation rate in the private domestic economy as measured by the implicit price deflater for that sector of the economy.

BUT RATES TOO LOW WILL LEAD TO INFLATION

It will be noted that there have been four periods, 1950–52, 1954–58, 1971–72, and 1974–78 when the return on Treasury bills was allowed to fall below 1 percent for an extended period of time. All of these periods, with the possible exception of the 1971–72 period when wage and price controls were in effect, were plagued by a problem of inflation.

AND SPECULATION

In 1978, many people became interested in real estate, commodities, and other types of tangible assets as a hedge against inflation. The quest for protection led to rampant speculation and highly distorted markets for residential housing, gold—you can see that in column 5 of this table 2—silver, various collectors items, and a number of other important commodities. The important message to come out of this table, I think, is that it is a mistake for the Federal Reserve to follow a monetary policy that is so easy as to create an expectation that there is no positive gain from holding Government securities, that this will lead to a stampede into other kinds of assets.

WHILE RATES TOO HIGH LEAD TO RECESSION

Our experience with very high rates of real return which in 1981 according to this measure were on the order of 5 percent, it's not so great in terms of duration and breadth of experience that we can confidently say what the ultimate outcome of having such rates in effect for a long period of time will be.

However, there are a number of industries that have been so devastated by such rates, automobiles, housing, steel, and others, that one I think has to be apprehensive about the desirability of having very high rates of return on liquid assets prevail for any length of time. It seems and there is some evidence to suggest that you don't have to have a very high rate of return to again create a sufficiently tight monetary condition to push the economy into an economic recession. That, in effect, is really the Fed's only way of coping with inflation.

TIGHT MONEY CONTROLS INFLATION, BUT AT HIGH COST

The last table I want to discuss is table 1 entitled, "Average Growth Rates for Real Output, Money and the Implicit Price Deflater, Private Business Sector." Here, when we look at inflation from the perspective of the quantity theory of money, inflation should be equal to the average growth rate for the money supply. These data, I believe, do suggest that tight money works in bringing down the inflation rate, but only with a very long lag and at a high cost in terms of unemployment and lost output. Actually, from the point of view of getting the best prediction of the inflation rate, you should look not at the growth of the money supply this year, but the growth of the money supply 2 years ago. That's too long a lag to be of great practicality from the point of view of practical politics.

CONGRESS NEEDS MORE WEAPONS

Under these circumstances, I think Congress must itself be concerned with other more efficient, less costly ways to control the inflation problem than allowing the Fed to be the only warhorse. To use repeatedly tight money has the disadvantage of costing us enormously in terms of lost output and high unemployment. Thank you.

[The group of tables referred to, together with Mr. Renshaw's prepared statement and accompanying papers, follows:]

Table 3

Presidential Elections and Economic
Well-being, 1896-1980

Presidential Election Year (1)	Four Year Percentage Increase in Real Personal Consumption Expenditures (2)	President Elected and Political Affiliation (3)	Was the President Elected from Opposing Party? (4)
1932	-11.75	Roosevelt (D)	YES
1920	6.69	Harding (R)	YES
1916	9.28	Wilson (D)	NO
1896	9.42	McKinley (R)	YES
1928	9.81	Hoover (R)	NO
1944	11.00	Roosevelt (D)	NO
1960	11.49	Kennedy (D)	YES
1976	11.75	Carter (D)	YES
1908	12.08	Taft (R)	NO
1952	12.14	Eisenhower (R)	YES
1980	13.27	Reagan (R)	YES
1940	13.58	Roosevelt (D)	NO
1956	15.80	Eisenhower (R)	NO
1972	16.19	Nixon (R)	NO
1964	16.81	Johnson (D)	NO
1968	20.15	Nixon (R)	YES
1936	20.64	Roosevelt (D)	NO
1912	21.54	Wilson (D)	YES
1904	21.59	Roosevelt (R)	NO
1948	22.34	Truman (D)	NO
1900	23.76	McKinley (R)	NO
1924	29.24	Coolidge (R)	NO

Consumption data from John Kendrick, Productivity Trends in the US (Princeton: Princeton University Press, 1961), Table A-IIa, for the period 1892-1940 and the Economic Report of the President, January 1981, for the years since 1940.

Table A
Monetary Policy, Inflation, and the Growth of Real GNP, 1948-81

Year	Annual Percengage Change M1 (1)	Average Annual Percentage Change Implicit Price Deflator for Real GNP (2)	Column (1) Minus Column (2) (3)	Average Annual Percentage Change in Real GNP in the Following Year (4)
1948	-1.4	6.9	-8.3	.5*
1949	- .3	- .9	.6	8.7
1950	4.5	2.1	2.4	8.3
1951	5.6	6.6	-1.0	3.7*
1952	3.8	1.4	2.4	3.8
1953	1.1	1.6	- .5	-1.2*
1954	2.7	1.2	1.5	6.7
1955	2.2	2.2	.0	2.1
1956	1.3	3.2	-1.9	1.8*
1957	- .7	3.4	-4.1	- .4*
1958	3.8	1.7	2.1	6.0
1959	1.6	2.4	- .8	2.2*
1960	.7	1.6	- .9	2.6*
1961	3.2	.9	2.3	5.8
1962	1.8	1.8	.0	4.0
1963	3.7	1.5	2.2	5.3
1964	4.6	1.5	3.1	6.0
1965	4.7	2.2	2.5	6.0
1966	2.5	3.2	- .7	2.7*
1967	6.6	3.0	3.6	4.6
1968	7.7	4.4	3.3	2.8
1969	3.2	5.1	-1.9	- .2*
1970	5.3	5.4	- .1	3.4*
1971	6.5	5.0	1.5	5.7
1972	9.3	4.2	5.1	5.8
1973	5.5	5.7	- .2	- .6*
1974	4.4	8.7	-4.3	-1.1*
1975	5.0	9.3	-4.3	5.4*
1976	6.6	5.2	1.4	5.5
1977	8.1	5.8	2.3	4.8
1978	8.3	7.3	1.0	3.2
1979	7.2	8.5	-1.3	- .2*
1980	6.4	9.0	-2.6	2.0*
1981p	6.3	9.1	-2.8	- .7*

*The average annual growth of real GNP following years when the December-to-December growth rate for M1 in column (1) was less than the Inflation rate in column (2).

Table B
The Accelerator Relationship Between the Average Annual Growth Rates for Real GNP and Gross Private Fixed Domestic Investment, 1955-81

Year	Real GNP (1)	Predicted Investment[a] (2)	Actual Investment (3)	Predicted Minus Actual Investment[b] (4)
1955	6.7	14.1	12.7	1.4
1956	2.1	.3	.7	- .4
1957	1.8	- .6	-1.3	.7
1958	- .4	-7.2	-6.5	- .7
1959	6.0	12.0	13.0	-1.0
1960	2.2	.6	.3	.3
1961	2.6	1.8	- .3	2.1
1962	5.8	11.4	8.7	2.7
1963	4.0	6.0	7.1	-1.1
1964	5.3	9.9	7.1	2.8
1965	6.0	12.0	11.3	.7
1966	6.0	12.0	4.4	7.6
1967	2.7	2.1	-2.4	4.5
1968	4.6	7.8	6.9	.9
1969	2.8	2.4	5.1	-2.7
1970	- .2	-6.6	-3.5	-3.1
1971	3.4	4.2	7.1	-2.9
1972	5.7	11.1	-11.5	- .4
1973	5.8	11.4	-8.4	3.0
1974	- .6	-7.8	-8.2	.4
1975	-1.1	-9.3	-12.2	2.9
1976	5.4	10.2	9.4	.8
1977	5.5	10.5	13.9	-3.4
1978	4.8	8.4	7.2	1.2
1979	3.2	3.5	3.1	.4
1980	- .2	-6.0	-7.1	.5
1981	2.0	.0	.1	- .1

[a] The predicted growth rate for fixed investment is equal to three times the growth rate for real GNP in column (1) minus six percentage points.

[b] Column (2) minus column (3).

TABLE C

The Bi-Modal Distribution of Average Annual Growth Rates for Real GNP 1949 - 82

Growth Rate Range in Percent	Number of Cases	Percent of Total Cases
-2.0 to - .1	7	20.6
.0 to 1.9	2	5.9
2.0 to 3.9	10	29.4
4.0 to 5.9	9	26.5
6.0 to 7.9	4	11.8
8.0 to 9.9	2	5.9
Totals	34	100.1

Table 1

Annual Growth Rates and First Differences in the Annual Growth Rates for M1, Real GNP and the Implicit Price Deflator for Real GNP, 1961-81.

	Annual Growth Rates for			First Differences in the Annual Growth Rates for		
	M1 (1)	Real GNP (2)	Implicit Price Deflator (3)	M1 (4)	Real GNP (5)	Implicit Price Deflator (6)
1961	3.2	6.4	.9	2.5	3.9	- .6
62	1.8	3.7	2.2	-1.4	-2.7	1.3
63	3.7	5.0	-1.5	1.9	1.3	- .7
64	4.6	4.5	1.4	.9	- .5	- .1
65	4.7	7.9	2.5	.1	3.4	1.1
66	2.5	4.2	3.7	-2.2	-3.7	1.2
67	6.6	3.1	3.3	4.1	-1.1	- .4
68	7.7	4.3	4.9	1.1	1.2	1.6
69	3.2	1.3	5.5	-4.5	-3.0	.6
70	5.3	- .1	5.0	2.1	-1.4	- .5
71	6.5	4.7	4.7	1.2	4.8	- .3
72	9.3	7.0	4.2	2.8	2.3	- .5
73	5.5	4.3	7.1	-3.8	-2.7	2.9
74	4.4	-2.7	10.0	-1.1	-7.0	2.9
75	5.0	2.2	7.6	.6	4.9	-2.4
76	6.6	4.4	4.7	1.6	2.2	-2.9
77	8.1	5.8	6.0	1.5	1.4	1.3
78	8.3	5.3	8.5	.2	- .5	2.5
79	7.2	1.7	8.1	-1.1	-3.6	- .4
80	6.4	- .3	9.8	- .8	-2.0	1.7
81	6.3	.9	8.9	- .1	1.2	- .9
	Average Growth Rates			Average Absolute First Differences		
1961-73	5.0	4.3	3.6	2.2	2.5	.9
1974-81	6.5	2.2	8.0	.9	2.8	1.9

Table 1

Annual Growth Rates for Various Definitions of the Money Supply and their Usefulness in Predicting the Average Annual Percentage Change in Nominal GNP in the following Year, 1959-80

	Annual Percentage Change				Following Year Average Annual Growth Rate for Nominal GNP	Forecasting Errors			
Year	M1-B (1)	M-2 (2)	M-3 (3)	L (4)	(5)	M1-B[a] (6)	M-2[b] (7)	M-3[b] (8)	L[b] (9)
1959	.9	3.9	3.8	3.8	3.8	- .5	- .1*	.0*	.0*
60	.6	4.9	5.2	3.9	3.6	- .4	-1.3	-1.6	- .3*
61	3.2	7.3	7.9	6.6	7.7	1.1	.4*	- .2*	1.1*
62	1.8	8.1	9.0	8.2	5.6	.4	-2.5	-3.4	-2.6
63	3.6	8.4	9.3	8.0	6.9	- .1	-1.5	-2.4	-1.1
64	4.6	8.0	8.9	7.3	8.4	.4	.4*	- .5	1.1
65	4.6	8.1	9.2	8.2	9.4	1.4	1.3*	.2*	1.2*
66	2.4	4.7	5.0	5.4	5.8	.0	1.1	.8	.4
67	6.5	9.4	10.7	8.7	9.2	- .7	- .2*	-1.5	.5*
68	7.8	8.1	8.9	9.5	8.1	-3.1	.0*	- .8*	-1.4*
69	3.1	3.8	.8	4.1	5.2	-1.3	1.4	4.4	1.1*
70	5.2	6.4	10.0	6.7	8.6	.0	2.2	-1.4	1.9
71	6.5	13.5	14.6	10.6	10.1	.2	-3.4	-4.5	- .5
72	9.2	13.0	14.0	13.2	11.8	- .8	-1.2	-2.2	-1.4
73	5.5	7.0	11.2	11.7	8.1	- .8	1.1	-3.1	-3.6
74	4.3	5.6	8.5	9.3	8.0	.3	2.4	- .5	-1.3
75	5.0	12.8	9.7	10.2	10.9	2.5	-1.9*	1.2*	.7*
76	6.6	14.2	12.0	11.3	11.6	1.6	-2.6	- .4*	.3*
77	8.1	10.9	12.3	12.7	12.4	.9	1.5	.1*	- .3*
78	8.3	8.3	11.2	12.4	12.0	.3	3.7	.8	- .4
79	7.2	8.6	9.2	11.1	8.8	-1.8	.2*	- .4*	-2.3
80p	6.4	9.5	10.7	10.5	11.4	1.6	1.9	.7*	.9*

[a] The actual growth rate for nominal GNP in column (5) minus the growth rate for M1-B in column (1) minus 3.4 percentage points.

[b] The actual growth rate for nominal GNP in column (5) minus the respective growth rates for M-2, M-3 and L in columns (2), (3) & (4).

*The asterisk signifies the same or a smaller absolute forecasting error for the broader monetary aggregate than for M1-B in column (6).

Table 2

Interest Rates and the Growth of Hourly Earnings and Economic Activity, The United States, 1958-81.

Year	Average Yield 3-Month Treasury Bills	Average Percentage Increase Adjusted Hourly Earnings Private Non Agricultural Industries	Real Rate of Interest[a]	Average Growth Rates for Real GNP	The Implicit Price Deflator
	(1)	(2)	(3)	(4)	(5)
1958	1.8	4.2	-2.4	- .4	2.7
59	3.4	3.5	- .1	6.0	2.4
60	2.9	3.4	- .5	2.2*	1.6
61	2.4	3.0	- .6	2.6	.9
62	2.8	3.4	- .6	5.8	1.8
63	3.2	2.8	.4	4.0	1.5
64	3.5	2.8	.7	5.3*	1.5
65	4.0	3.6	.4	6.0*	2.2
66	4.9	4.3	.6	6.0*	3.2
67	4.3	5.0	- .7	2.7*	3.0
68	5.3	6.1	- .8	4.6	4.4
69	6.7	6.7	.0	2.8	5.1
70	6.5	6.6	- .1	- .2*	5.4
71	4.3	7.2	-2.9	3.4*	5.0
72	4.1	6.2	-2.1	5.7	4.2
73	7.0	6.2	.8	5.8	5.7
74	7.9	8.0	- .1	- .6*	8.7
75	5.8	8.4	-2.6	-1.1*	9.3
76	5.0	7.2	-2.2	5.4	5.2
77	5.3	7.6	-2.3	5.5	5.8
78	7.2	8.1	- .9	4.8	7.3
79	10.0	8.0	2.0	3.2	8.5
80	11.5	9.0	2.5	- .2*	9.0
81p	14.1	9.1	5.0	2.0*	9.1

[a] Column (1) minus column (2).

* Growth rates for real GNP following years when the average yield on 3-month Treasury Bills was about equal to or greater than the average percentage increase in adjusted hourly earnings.

Table 2

The Real Return on 3-Month Treasury Bills and Related Statistics,
for the Private Domestic Economy, 1949-81

Year	Average Yield New 3-Month Treasury Bills	Inflation Rate[a]	Real Interest Rate[b]	Growth of Real Output[a]	Annual Percentage Change in Price of Gold
	(1)	(2)	(3)	(4)	(5)
1949	1.1	-1.0	2.1	-1.9	
50	1.2	1.6	- .4	9.1	
51	1.6	7.4	-5.8	5.8	
52	1.8	1.1	.7	3.3	
53	1.9	.9	1.0	4.3	
54	1.0	1.0	.0	-1.0	
55	1.8	1.6	.2	7.9	
56	2.7	3.3	- .6	2.6	
57	3.3	3.5	- .2	1.0	
58	1.8	1.3	.5	-1.6	
59	3.4	2.0	1.4	7.3	
60	2.9	1.4	1.5	1.6	
61	2.4	.6	1.8	1.7	
62	2.8	1.5	1.3	5.5	
63	3.2	1.1	2.1	4.3	
64	3.5	1.0	2.5	6.0	
65	4.0	1.9	2.1	6.8	
66	4.9	3.0	1.9	5.5	
67	4.3	2.7	1.6	2.2	
68	5.3	4.0	1.3	5.1	
69	6.7	4.9	1.8	2.9	
70	6.5	4.5	2.0	- .6	6.6
71	4.3	4.4	- .1	3.0	11.4
72	4.1	3.4	.7	6.6	48.6
73	7.0	5.4	1.6	6.6	72.4
74	7.9	9.4	-1.5	-1.9	65.6
75	5.8	9.7	-3.9	-1.9	-24.6
76	5.0	4.7	.3	6.1	- 3.9
77	5.3	5.6	- .3	6.3	22.5
78	7.2	7.4	- .2	4.7	36.8
79	10.0	8.8	1.2	2.8	126.4
80	11.5	9.2	2.3	- .8	15.1
81p	14.1	9.2	4.9	2.0	-32.6

[a] Average annual growth rates for the implicit price deflator and real output for the private domestic economy.

[b] Column (1) minus column (2).

Table 1

Average Growth Rates for Real Output, Money and the Implicit Price Deflator, Private Business Sector, Selected Years and Periods, 1947-80.

Year or Period	Growth of Real Output	Monetary Growth Rate[a]	Inflation Rate for the Implicit Price Deflator	Predicted Minus the Actual Inflation Rate: Current Monetary Growth[b]	Predicted Minus the Actual Inflation Rate: Lagged Monetary Growth[c]	Predicted Minus the Actual Inflation Rate: Previous Inflation Rate[d]
	(1)	(2)	(3)	(4)	(5)	(6)
1960	1.6	.0	1.4	-1.4		.6
61	1.7	2.1	.6	1.5		.8
62	5.5	2.4	1.5	.9	-1.5	- .9
63	4.3	3.1	1.1	2.0	1.0	.4
64	6.0	3.9	1.0	2.9	1.4	.1
65	6.8	4.2	1.9	2.3	1.2	- .9
66	5.5	4.6	3.0	1.6	.9	-1.1
67	2.2	4.0*	2.7	1.3	1.5	.3
68	5.1	7.0	4.0	3.0	.6	-1.3
69	2.9	6.0*	4.9	1.1	- .9	- .9
70	- .8	3.7*	4.5	- .8	2.5	.4
71	3.0	6.7	4.4	2.3	1.6	.1
72	6.6	7.1	3.4	3.7	.3	1.0
73	6.6	7.3	5.4	1.9	1.3	-2.0
74	-1.9	4.9*	9.4	-4.5	-2.3	-4.0
75	-1.9	4.6*	9.7	-5.1	-2.4	- .3
76	6.3	5.5	4.7	.8	.2	5.0
77	6.3	7.5	5.6	1.9	-1.0	- .9
78	4.7	8.2	7.4	.8	-1.9	-1.8
79	2.8	7.8*	8.8	-1.0	-1.3	-1.4
80	- .9	6.2*	9.2	-3.0	-1.0	- .4
1948-53	4.1	2.8	2.0	.8		
1953-57	2.4	1.8	2.3	- .5		
1957-60	2.4	1.6	1.6	.0		
1960-69	4.4	4.2	2.3	1.9		
1969-73	3.8	6.2	4.4	1.8		
1973-79	2.7	6.3	7.6	-1.3		
1947-79	3.6	3.9	3.6	.3		

[a] Average annual growth rate for M1-B and its predecessor M1.

[b] Column (2) minus column (3).

[c] The monetary growth rate in column (2) lagged two years minus the current inflation rate in column (3).

[d] First differences in the inflation rates in column (3).

* Denotes years when the monetary growth rate was contracted.

Average Growth Rates for Money, Labor Compensation, Output per Hour and the Implicit Price Deflator, Private Business Sector, selected Periods, 1948-79

Period	Compensation per Hour (1)	Output per Hour (2)	Implicit Price Deflator (3)	M1-B and M1[a] (4)	Predicted Minus the Actual Inflation Rate	
					Compensation minus Labor Productivity[b] (5)	Crude Quantity Theory of Money[c] (6)
1948-53	6.2	3.7	2.0	2.8	.5	.8
1953-57	4.7	2.3	2.3	1.8	.1	- .5
1957-60	4.1	2.6	1.6	1.6	.1	.0
1960-69	5.4	3.1	2.3	4.2	.0	1.9
1969-73	7.1	2.6	4.4	6.2	.1	1.8
1973-79	8.9	.8	7.6	6.3	.5	-1.3
1947-79	6.3	2.6	3.6	3.9	.1	.3

Source of Basic Data: Economic Report of the President, January 1981, pp. 276 & 301 and Historical Statistics of the U.S.: Colonial Times to 1957, p. 646.

[a] Compound average growth rate for M1 & M1-B as of June of the year in question.

[b] Column (1) minus column (2) minus column (3). These error terms are approximately equal to the compound average percentage change in labor's share of private sector gross domestic product.

[c] Column (4) minus column (3).

Prepared Statement of Edward F. Renshaw

Frank Morris, President of the Federal Reserve Bank of Boston, has noted that the use of monetary aggregates as targets for monetary policy rests fundamentally on the assumption that the relationship of the aggregates to nominal GNP is relatively stable and predictable. Morris believes that financial innovations raise serious doubts as to the validity of this assumption.[1]

His doubts are shared by Anthony Solomon, President of the Federal Reserve Bank of New York.[2] My own research supports their concern[3] and leads me to conclude that Congress should withdraw its endorsement of monetary targets. I also believe that the Federal Reserve Banks should be assigned an important role in helping to revitalize thrift institutions that have been financially impaired by the Fed's disinflationary policies.

Recent history would suggest that there is no magic in trying to stabilize or even gradually slow the growth of the more conventional money supply, M1. Its velocity of circulation is simply too unstable.

Table 1 of the enclosed handout indicates that considerable progress has been made at stabilizing the annual December-to-December growth rates for M1 since the Arab oil embargo of 1973. The average absolute first differences in the annual growth rates for M1 were less than half as large from 1974-81 as from 1961-73.

Table 1

Annual Growth Rates and First Differences in the Annual Growth Rates for M1, Real GNP and the Implicit Price Deflator for Real GNP, 1961-81.

	Annual Growth Rates for			First Differences in the Annual Growth Rates for		
	M1 (1)	Real GNP (2)	Implicit Price Deflator (3)	M1 (4)	Real GNP (5)	Implicit Price Deflator (6)
1961	3.2	6.4	.9	2.5	3.9	- .6
62	1.8	3.7	2.2	-1.4	-2.7	1.3
63	3.7	5.0	1.5	1.9	1.3	- .7
64	4.6	4.5	1.4	.9	- .5	- .1
65	4.7	7.9	2.5	.1	3.4	1.1
66	2.5	4.2	3.7	-2.2	-3.7	1.2
67	6.6	3.1	3.3	4.1	-1.1	- .4
68	7.7	4.3	4.9	1.1	1.2	1.6
69	3.2	1.3	5.5	-4.5	-3.0	.6
70	5.3	- .1	5.0	2.1	-1.4	- .5
71	6.5	4.7	4.7	1.2	4.8	- .3
72	9.3	7.0	4.2	2.8	2.3	- .5
73	5.5	4.3	7.1	-3.8	-2.7	2.9
74	4.4	-2.7	10.0	-1.1	-7.0	2.9
75	5.0	2.2	7.6	.6	4.9	-2.4
76	6.6	4.4	4.7	1.6	2.2	-2.9
77	8.1	5.8	6.0	1.5	1.4	1.3
78	8.3	5.3	8.5	.2	- .5	2.5
79	7.2	1.7	8.1	-1.1	-3.6	- .4
80	6.4	- .3	9.8	- .8	-2.0	1.7
81	6.3	.9	8.9	- .1	1.2	- .9
	Average Growth Rates			Average Absolute First Differences		
1961-73	5.0	4.3	3.6	2.2	2.5	.9
1974-81	6.5	2.2	8.0	.9	2.8	1.9

Changes in the annual growth rates for real GNP, on the other hand, were slightly greater in the more recent period than in the earlier period. First differences in the inflation rates for the implicit price deflator for the real GNP, moreover, have been more than twice as great on the average since the oil embargo as from 1961-73.

Checkable Now accounts that pay interest and automatic transfers of funds between savings accounts and checking accounts are making it increasingly difficult to define transaction balances. Credit cards and checking accounts with no minimum balances have made human capital a partial substitute for currency and demand deposits. Some brokerage firms allow their customers to write checks against shares in the money market funds and against stocks and bonds deposited to marginal accounts. And if insurance companies and firms in the business of financing real estate have it their way, it may soon be possible to write checks against home equity and life insurance.

As we move to a brave new world where an increasing proportion of saving accounts and many other assets are checkable on demand it will be even more hopeless to try to delineate a satisfactory measure of transaction balances and less realistic to suppose that there will exist a stable relationship between M1 and the economic variables we wish to control.

The surprisingly rapid growth of M1 during the recent economic contraction would appear, in any event, to provide a good example of how a monetary target can lock a central bank into a degree of monetary tightness (or economic straight jacket necessary to preserve its own credibility) which, if it were not for the current budgetary impass and extraordinary defícts projected for fiscal 1983 and beyond, would be completely unjustified.

Some advocates of monetary targeting have suggested that the fault lies not with the idea of targeting but with the monetary aggregates or economic variables to be targeted.

Nobel prize winners James Tobin and James Meade have suggested that the target for monetary policy should be the growth of nominal GNP.[4] This is a very appealing idea but might very well have the disadvantage of bringing the Federal Reserve into open conflict with the Administration and the US Congress which may have different goals for national income. It is by no means clear, moreover, whether the Fed does have the ability to control the growth of nominal income with much precision.

Frank Morris has suggested that total liquid assets might be superior to the Fed's other monetary aggregates as a target for guiding Monetary Policy.[5] There are a number of factors, however, which make total liquid assets a rather poor tool to use in monetary management. Changes in some of the more inclusive liquid assets in L are not available on a timely basis. It should also be noted that L has often done a poor job of predicting recessionary slumps in the growth of both nominal and real GNP.

Even more disturbing is the possibility that interest rate uncertainly and such financial innovations as money market mutual funds may have made it impossible, at times, for the Fed to control the growth of L and its broader monetary aggregates.

The last two years have been years of very tight money judging by the behavior of interest rates. During such a period one would ordinarily expect the growth of the Fed's broader monetary aggregates to decline.

There was some acceleration in the growth of M2 and M3 in 1980, however, and a further modest acceleration in the growth of both of these aggregates in 1981. The growth of total liquid assets also appears to have accelerated during most of 1981.

Henry Kaufman has long argued that the Fed should focus on credit creation as a target rather than the monetary aggregates[6] and Benjamin Friedman of Harvard University has recently advocated a dual money and credit target.[7] He has shown that there is a fairly stable relationship between nominal GNP and the total outstanding debt of US non financial borrowers. But credit targets also have defects.

When the sales of business enterprises slump unexpectedly, inventory will pile up and increase the need for bank loans. At such times credit creation can be a highly misleading indicator of monetary tightness.

As the flaws in M1 and various other targets are better appreciated, I believe that the Fed will be encouraged to abandon the use of targets to structure monetary policy and in the words of Anthony Solomon, return to"some broadly-framed constraints on real interest rates and a renewed emphasis on nominal interest rates as short-term operating objectives."[8]

Economic theory suggests that if the demand for money is unstable--as has been the case in the last decade and is likely to remain the case in a world of financial innovation--it may be better for policy makers to stabilize the real rate of interest than the growth of the money supply.[9]

There are numerous ways to measure the real interest rate. In Table 2,a real rate is computed by subtracting the average percentage increase in adjusted hourly earnings in private nonagricultural industries from the average yield on new 3-month Treasury Bills for the years 1958-81.

Table 2

Interest Rates and the Growth of Hourly Earnings and Economic Activity, The United States, 1958-81.

Year	Average Yield 3-Month Treasury Bills (1)	Average Percentage Increase Adjusted Hourly Earnings Private Non Agricultural Industries (2)	Real Rate of Interest[a] (3)	Average Growth Rates for Real GNP (4)	The Implicit Price Deflator (5)
1958	1.8	4.2	-2.4	- .4	1.7
59	3.4	3.5	- .1	6.0	2.4
60	2.9	3.4	- .5	2.2*	1.6
61	2.4	3.0	- .6	2.6	.9
62	2.8	3.4	- .6	5.8	1.8
63	3.2	2.8	.4	4.0	1.5
64	3.5	2.8	.7	5.3*	1.5
65	4.0	3.6	.4	6.0*	2.2
66	4.9	4.3	.6	6.0*	3.2
67	4.3	5.0	- .7	2.7*	3.0
68	5.3	6.1	- .8	4.6	4.4
69	6.7	6.7	.0	2.8	5.1
70	6.5	6.6	- .1	- .2*	5.4
71	4.3	7.2	-2.9	3.4*	5.0
72	4.1	6.2	-2.1	5.7	4.2
73	7.0	6.2	.8	5.8	5.7
74	7.9	8.0	- .1	- .6*	8.7
75	5.8	8.4	-2.6	-1.1*	9.3
76	5.0	7.2	-2.2	5.4	5.2
77	5.3	7.6	-2.3	5.5	5.8
78	7.2	8.1	- .9	4.8	7.3
79	10.0	8.0	2.0	3.2	8.5
80	11.5	9.0	2.5	- .2*	9.0
81p	14.1	9.1	5.0	2.0*	9.1

[a] Column (1) minus column (2).

* Growth rates for real GNP following years when the average yield on 3-month Treasury Bills was about equal to or greater than the average percentage increase in adjusted hourly earnings.

It will be noted that the average bill rate was about equal to the growth of wages during the generally prosperous decade of the 1960s and that there have been wide fluctuations in this measure of the real interest rate since 1970.

From 1971-72 and in the more recent period from 1975-77 the yield on 3-month treasury bills was allowed to drop more than two percentage points below the average growth rate for adjusted hourly earnings. Both of these periods of easy credit helped to set the stage for a rapid escalation of the general price level.

The slowness of the monetary authorities to respond to inflationary pressures (before 1979) is now regarded by many economists as one of the chief defects of a monetary policy linked to interest rates. The Fed, if it had chosen to do so, however, could have acted more swiftly to raise nominal interest rates in line with inflation and perhaps have prevented some of the speculative excesses of the 1970s.

In a belated effort to slow inflation and better achieve it monetary targets the Federal Reserve has recently allowed interest rates to rise to very painful levels. To find a precedent for wage adjusted returns on Treasury bills in the vicinity of five percent or more one has to go back to 1931-32 when the US economy was plunging into the great depression of the 1930s.

The unanticipated shift of monetary policy from negative returns on liquid assets to very high rates of return has helped to tip the US economy into back-to-back recessions and has led to a dramatic upsurge in the number of business failures. Statistics compiled by Dun and Bradstreet for the first four months of 1982 show a failure rate of about

80 firms per 10,000 businesses, the highest failure rate since 1933 when this country was in the depths of a great depression.

To make the Board of Governors of the Federal Reserve a little more sensitive to some of the undesirable side-effects of erratic monetary policy, I believe that the Fed should be assigned an important role in helping to revitalize thrift institutions, with large portfolios of low interest mortgages outstanding,[10] and perhaps even some of our larger nonfinancial corporations that are now on the virge of bankruptcy.[11]

The Federal Reserve Banks now hold more than $130 billion of government securities, only part of which is needed to manage the money supply. By exchanging some of these securities for private sector "income bonds" that might later be resold to the public, once the economy has recovered from the current recession and issuers are in a position to pay interest on additional indebtedness, the Federal Reserve would not only be helping to offset some of the adverse effects of tight money but would also be strengthening its ability to reimpose a stringent monetary policy if another oil shortage or a world wide crop failure were to rekindle inflationary pressures.

Tight money and high interest rates do tend to reduce the inflation rate but with a long lag and at a high cost in terms of reduced output and increased unemployment. In the short run, such policies have been more successful at deflating the growth of real output than the inflation rate. See columns (3), (4), and (5) of Table 2.

Since high rates of return on liquid assets will discourage investment that is needed to bolser labor productivity and reduce our dependence on imported oil,it seems clear to me that more attention should be paid by Congress and the Administration to other ways of moderating inflationary pressures.[12] To leave the job of controlling inflation exclusively to the Federal Reserves will run the risk of a very prolonged period of economic stagnation and political tumoil that might jeopardize the survival of both democratic institutions and independent central banking authorities.

Rescuing the Thrift Institutions

Andrew Carron of the Brookings Institution has estimated that if the mortgages held by thrift institutions had been liquidated as of mid 1981 their realized market value would have been $111.2 billion less than the value at which they were carried on the books. His study also suggests that, if interest rates do not decline significantly from the average rates which prevailed in 1981, between 15 and 27 percent of the federally insured savings and loan associations in the US (609 to 1,076 associations) will find themselves in an untenable position by the end of 1983 and will not be able to return to break-even operations without drastic cost cutting, good fortune, merger with a more healthy financial institution, or a cash infusion from the government.[13]

The financial plight of thrift institutions has spauned a host of costly bailout proposals which would further imbalance the federal budget. Given the limited resources available, the danger is that any new program "will be too broad, overly diffuse, and therefore both costly and inadequate to deal with the most critical problem, that of the failing thrift institutions."[14]

One of the advantages of having an independent agency like the Federal Reserve become more involved in helping to restore the thrift industry to a sound condition is that it might be freer to focus its resources on those problem institutions that can be made viable with only a modest amount of financial assistance. This would allow the Federal Savings and Loan Insurance Corporation to concentrate its time and resources on the more hopeless cases that cannot be returned to profitability without merger and a subsidy from the FSLIC.

One of the chief defects of most plans to rescue the thrift industry is that they do not come efficiently to grips with the longer run problem of infusing new equity or risk-type capital into the industry. Without such capital the industry will not be in a good position to weather another bout of tight money that might be necessary at some point in the not too distant future to cope with inflationary pressures resulting from another oil shortage or a world wide crop failure.

One way to solve this problem would be to have the Fed exchange some of its government securities, that are not needed to manage the money supply, for income bonds issued by needy or otherwise deserving thrift institutions. Income bonds are bonds that do not pay interest unless the issuer has net income. The presumption is that the Fed would hold these bonds until the issuing thrift institutions have returned to a state of profitability and would then be free to sell the bonds to the general public in the open market.

Since the financial plight of thrift institutions is in part the result of an unexpected shift in monetary policy to extremely high real rates of interest it would seem only fiting that the Fed be given a role in helping to return this industry to a state where it can weather greater variation in interest rates.

Section 103 of the Depository Institutions Deregulation and Monetary Control Act of 1980 requires the Federal Reserve to "take into consideration the special needs of savings and other depository institutions for access to discount and borrowing facilities consistent with their long-term asset portfolios and the sensitivity of such institutions to trends in the national money markets."

The regulations issued by the Federal Reserve Board in response to section 103, however, are only intended to address liquidity problems of a short term nature. Only short-term Federal Reserve loans will be made at favourable rates; after five months the interest rate will be raised to 16 percent. The rules, moreover, require the Federal Home Loan Bank Board or the FDIC to state "why funds are not available from other sources" before the loans are made to thrifts.[13]

In most other countries of the world the central banking authorities are assigned a much broader role in helping to preserve the economic health of financial institutions and business enterprises. What is needed in this country, I believe, is new authority which both authorizes and encourages the Federal Reserve to address the longer run problem of helping to infuse more risk or equity type capital into our beleaguered thrift industry and some of our larger and more capital intensive non financial corporations.

FOOTNOTES

[1] Frank E. Morris, "Do the Monetary Aggregates Have a Future as Targets of Federal Reserve Policy?" *New England Economic Review*, March/April, 1982, pp. 5-14.

[2] Anthony M. Solomon, "Financial Innovation and Monetary Policy," a paper presented before the joint luncheon of the American Economic and American Finance Associations, December 28, 1981, Washington, D.C.

[3] See my paper on "What Should the Federal Reserve Stabilize," which is appended to this testimony.

[4] James Meade, "The Meaning of 'Internal Balance,'," *The Economic Journal*, September 1978, pp. 430-431 and James Tobin in *Controlling Monetary Aggregates III*, Federal Reserve Bank of Boston Conference Series No. 23, October 1980, p. 75.

[5] Frank Morris, *op. cit.*, p. 10.

[6] See *Controlling Monetary Aggregates* III, p. 68.

[7] Benjamin M. Friedman, "Time to Reexamine the Monetary Targets Framework," *New England Economic Review*, March/April, 1982, pp. 15-23.

[8] Solomon, *op. cit.*, p. 11.

[9] William Poole, "Optimal Choice of Monetary Policy Instruments in a Simple Stochastic Macro Model," *Quarterly Journal of Economics*, May 1970, pp. 197-216.

[10] Andrew S. Carron, *The Plight of the Thrift Institutions* (Washington: The Brookings Institution, 1982), 96 pp.

[11] Edward Renshaw, "Using the Fed to Facilitate an Infusion of New Equity Capital into Non-financial Corporations," *The Money Manager*, September 15, 1980, p. 5.

[12] See "Time for an Incomes Policy," *Challenge*, November 1981, pp. 50-54 and my paper on "Money Versus a Supply-Side View of the Inflationary Process," which is appended to this testimony.

[13] Andrew Carron, *op. cit.*, pp. 29-31.

[14] *Ibid.*, p. 48.

[15] Federal Reserve Board, press release, August 20, 1981, pp. 2-3.

What Should the Federal Reserve Stabilize

by

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Anthony Solomon, president of the Federal Reserve Bank of New York, has noted that the U.S. is now in the midst of a wave of innovation in the financial industry that amounts to a veritable revolution. He believes that this revolution may eventually force the Fed to abandon the use of long- term monetary targets to structure monetary policy and return to an approach based on some broadly-framed constraints on real interest rates with a renewed emphasis on nominal interest rates as short-term operating objectives.[1]

The establishment of target rates of growth for key monetary aggregates has been used internally by the Federal Reserve since the early 1970s. Targeting was later formalized and made public in response to a Congressional Resolution in 1975 and was reaffirmed in the Full Employment and Balanced Growth Act of 1978.

In October 1979 the Board of Governors of the Federal Reserve abandoned an historic policy of stabilizing nominal interest rates with the primary objective of enhancing the achievement of its monetary targets. It was hoped that a better control of these aggregates would provide a more coherent and effective monetary response to endemic inflation.

For monetary targeting to be successful there must exist a reasonably stable and predictable relationship between the monetary aggregates and the economic variables that the Fed wishes to control. The wave of financial innovation we are now experiencing seems to be producing major effects on these relationships, however, and, in the opinion of Anthony Solomon, these effects seem likely to grow larger over time.

> It seems to me that these effects are having and will continue to have implications for what money measures we target and for the levels at which the targets are set. Perhaps in the longer run, even the very viability of money stock targets is at stake.[2]

In their study for the Commission on Money and Credit, Friedman and Meiselman have suggested that a monetary aggregate ought to be judged on the basis of its ability to either forecast or explain changes in national income.[3]

Financial innovations have already led to a highly unstable relationship between income and currency plus demand deposits at commercial banks, M1-A. In the future the Federal Reserve plans to confine its targeting of transaction balances to a new M1 (or slightly modified M1-B) which includes travelers' checks and other checkable deposits at commercial banks and various thrift institutions.

Annual December-December growth rates for M1-B are presented in the first column of Table 1 and can be compared to average annual percentage changes in nominal GNP in the following year in column (5). Column (6) shows the forecasting errors for M1-B when its velocity of circulation is assumed to increase at a steady rate of 3.4 percent per year.

It will be noted that M1-B was a rather good predictor of nominal GNP from 1959-74. During this sixteen year period there were 12 years with a forecasting error of under one percentage point. In the last six years, on the other hand, there have only been two years with a forecasting error this low.

The poor forecasting record since 1974 can probably be attributed to a host of financial innovations, such as checkable Now accounts that pay interest and automatic transfers of funds between savings and checking accounts, which are making it increasingly difficult to delineate transaction balances.

Credit cards and checking accounts with no minimum balances have made human capital a partial substitute for currency and demand deposits. Some brokerage firms allow their customers to write checks against shares in money market funds and against stocks and bonds deposited in margin accounts. And if insurance companies and firms in the business of financing real estate have it their way, it may soon be possible to write checks agains home equity and life insurance.[4]

As we move to a brave new world where an increasing proportion of savings accounts and many other assets are checkable on demand it will be more and more hopeless to try to delineate a satisfactory measure of transaction balances. In such a world it would seem logical to shift the concept of money away from currency and demand deposits to a broader collection of liquid assets or "store of wealth" that might be built up in anticipation of spending in the not too distant future.

Interest in broader monetary aggregates was apparent at the Fed even before M1-B and its predecessor M1 ceased to be a fairly reliable predictor of future GNP. In a presentation before the House Banking Committee on February 6, 1975, Chairman Arthur Burns noted that the Board of Governors of the Federal Reserve and its open market committee do pay close attention to monetary aggregates but do not confine their attention to one particular definition of the money supply, namely, demand deposits plus currency outside banks:

> "The reason is that this concept of the money supply, however significant it may have been 10 or 20 years ago, no longer captures adequately the

> forms which liquid balances--or even just transaction balances--are currently held. Financial technology in our country has been changing rapidly. Corporate treasurers have learned how to get along with a minimum of demand deposits, and to achieve the liquidity they need by acquiring interest-earning assets. For the public at large, saving deposits at commercial banks, shares in savings and loan associations, certificates of deposit, Treasury bills, and other liquid instruments have become very close substitutes for demand deposits."

Annual growth rates for two broader definitions of the money supply, M-2 and M-3, and an even more encompassing collection of liquid assets, L, are presented in columns (2) through (4) of Table 1. The forecasting errors in the last three columns of Table 1 are based on the traditional quantity theory assumption that the percentage change in velocity will be equal to zero. An asterisk is assigned to those error terms which are less absolutely than the corresponding error terms for M1-B, when its velocity is assumed to increase at a 3.4 percent rate.

It will be noted that M-2 was often a better predictor of future GNP then M1-B from 1959-68. Since 1968 there have only been two years when M-2 was a superior predictor of future income. The contemporary forecasting record for this aggregate is so poor as to raise a serious question as to whether it deserves to be assigned a targeted rate of growth.

The recent forecasting errors for M-3 are more impressive. For the seven year period from 1974-80, M-3 is able to explain the following year growth rates for nominal GNP with an average absolute error of about one-half a percentage point. In the preceding 15 year period from 1959-73, though, the forecasting errors for M-3 were sometimes very large. The many large errors for this period may mean that the recent forecasting success of M-3 was something of a fluke.

This monetary aggregate is estimated to have increased 11.4 percent in 1981. Some economists, such as Irwin Kellner of Manufacturers Hanover Trust Company, are now predicting an increase in nominal GNP for 1982 of less than 4 percent which would imply a forecasting error for M-3 of more than seven percentage points for 1982.

The Fed's more inclusive collection of liquid assets, L, has done a better job of forecasting nominal GNP in a majority of years than either M-2 or M-3. There are a number of factors, however, which make total liquid assets a rather poor tool to use in monetary management. Changes in some of the more inclusive liquid assets in L are not available on a timely basis. It should also be noted that L has often done a poor job of predicting recessionary slumps in the growth of both nominal and real GNP.

The poor forecasting record for L during years containing a decline in business activity is related in part to a tendency for the U.S. Treasury to issue proportionately more short term securities when credit is tight and interest rates are high and for businesses to satisfy proportionately more of their credit needs with commercial paper and banker's acceptances than ordinary bank loans. Total liquid assets, as a consequence, have usually grown more rapidly than the Fed's other monetary aggregates during years containing either a peak or a near peak in business activity such as 1969, 1973 and 1979. This may not continue to be the case in the future, however.

One of the more important points to emerge from Anthony Solomon's discussion of financial innovation and monetary policy is that new innovations may have already created an environment where it will sometimes be impossible for the Fed to control the growth of its broader monetary aggregates.

The last two years, 1980 and 1981, have been years of very tight money judging by the behavior of interest rates and various other indicators of credit availability. During such a period one would ordinarily expect the growth rates for the Fed's broader monetary aggregates to decline. There was some acceleration in the growth of both M-2 and M-3 in 1980, however, and a further modest acceleration in the growth of both of these aggregates in 1981.

The acceleration is related to an explosive growth of money market mutual fund shares from assets equal to $43.6 billion at the end of 1979 to more than $180 billion at the end of 1981. (These assets are included in both M-2 and M-3 but excluded from M1-B.)

The increase in money market mutual fund shares has been partly at the expense of a slower growth rate for demand deposits and savings accounts but has also been at the expense of individual investment in corporate bonds and commercial paper. In 1979 individuals increased their holdings of these assets by $16 billion. During the second quarter of 1980, when credit was very tight, they liquidated these securities at an annualized rate of $17.5 billion.[5]

Whether the massive build-up of money market mutual fund shares is a one time thing, a trend that will continue at perhaps a slower rate, or the beginning of a new type of roller-coaster development is uncertain. If short term interest rates were to remain low for an extended period of time and inflation fears were to abate one could imagine a rather dramatic shift out of these assets into common stocks and long term bonds with higher yields.

The possiblility of large, yet difficult to predict, shifts between short and longer term assets could, in turn, lead to rather erratic changes in the growth rates for M-2, M-3 and L and make these aggregates both poor predictors of economic activity and unreliable gauges of whether monetary policy is sufficiently easy or too tight.

The haunting spectre of monetary aggregates that cannot be controlled and might inadvertently lead the Fed to tighten credit to the point of pushing the U.S. economy into another recession every year or two, in any event, is a good reason for re-examining monetary policy from an interest rate perspective.

In Table 2 we subtract the average annual inflation rates for the private domestic economy from the average annual yield on new 3-month Treasury bills to obtain real interest rates for high quality liquid assets from 1949-81.

There have been four periods (1950-52, 1954-58, 1971-72 and 1974-78) when the inflation adjusted returns on Treasury bills were allowed to dip below one percent for an extended period of time. All of these period, with the possible exception of the 1971-72 period when wage and price controls were in effect, were plagued by a problem of inflation.

In the mid 1970s, after the Fed had again allowed the inflation adjusted return on Treasury bills to decline to negative levels, many people became interested in real estate, commodities, and other types of tangible assets as a hedge against inflation. The quest for inflation protection in turn led to rampant speculation and highly distorted markets for residential housing, gold (see column (5) of Table 2), silver, various collector's items and a number of important commodities.

The slowness of the monetary authorities to respond to inflationary pressures (before 1979) is now regarded by many economists as one of the chief defects of a monetary policy linked to interest rates. The Fed, if it had chosen to do so, however, could have acted more swiftly to raise nominal interest rates in line with inflation and perhaps have prevented some of the speculative excesses of the 1970s. Whether this would have actually solved the inflation problem is less certain.

Prior to the Fed's October 1979 decision to allow short term interest rates to fluctuate more freely there was only one instance, the non-recessionary tax-cut year of 1964, when the inflation adjusted return on Treasury bills was allowed to average more than 2.1 percent for a full calendar year. This also happens to have been the last year when the inflation rate for the private domestic economy was held to the comparatively low level of only one percent.

The Fed's new policy of trying to slowly reduce the growth of the nation's monetary aggregates hasn't been in effect long enough so that one can confidently predict all of the consequences of keeping the real return on Treasury bills above the 2.5 percent rate which prevailed on the average during 1964.

The rather sharp decline in economic activity in the second quarter of 1980 (after the real interest rate had been above 2.5 percent for five months) and in the fourth quarter of 1981 (after it had been above this figure for about 11 months) would suggest, however, that high rates of return on liquid assets may lead to economic stagnation.

The economic recovery of 1980-81, in any event, has the distinction of being both the shortest and most anemic of any business expansion in the post World War II period. Economic stagnation is not something that politicians can live with for very long.

During the 85 year period from 1896-1980 there were nine instances when an incumbent political party lost the Presidential election. In seven of these turnover cases the improvement in economic well-being, as measured by the increase in real (constant dollar) personal consumption expenditures for the four year period culminating in the election of a new President, was below average. See table 3.

When consumption was increasing at an above average pace, on the other hand, it was very difficult to defeat an incumbent political party. In 1912 former President Theodore Roosevelt formed a new "progressive" party and ran against his Republic successor, William Howard Taft. This split the Republican vote enough to permit the Democratic candidate, Woodrow Wilson, to attain the Presidency with less than 42 percent of the popular vote.

A similar turnover amid prosperity occurred in 1968 after George Wallace and his American Independent party split the Democratic vote and allowed Richard Nixon to defeat Hubert Humphrey with only 43.4 percent of the popular vote.

These are the only two instances when a party in power was defeated after an above average increase in consumption. Both involved a suicidal division within the incumbent party. In the absence of such a division the American voter has not been inclined to rock the boat of economic prosperity.

There have been a few instances when a political party was able to stay in power after four years of lack-lustre consumption growth (Taft 1908, Wilson 1916, Hoover 1928 and Roosevelt 1944). All of these cases occurred either before the great depression of the 1930s or during World War II when many consumer goods were rationed. Since the end of World War II there has been a consistent propensity to change presidents after four years of sub-par performance.

The data in Table 3 would strongly suggest that the American electorate does hold political parties accountable for their economic performance. Since actions by the Federal Reserve are subject to Congressional review it is not unreasonable to suppose that the Fed will also be held accountable for its performance.

In the last two years, 1980 and 1981, none of the Fed's target growth ranges for M1-A, M1-B, M-2 and M-3 were actually achieved.[6] Such poor success at meeting stated objectives makes it very difficult for one to place much confidence in monetary targeting. Even more worrisome is the possibility that successful targeting might lead to unpredictable consequences in a world that is subject to repeated waves of financial innovation.

Monetary targets, in the final analysis, are at best a means to other ends and should not be regarded as an end in themselves. A policy of stabilizing the real return on short term securities, on the other hand, might be considered virtuous for its own sake.[7]

History would suggest that very low rates of return on short term government securities are unfair to savers, will fuel inflation, and may lead to undesirable speculation in a world where real estate, consumer durables, commodities, various collector's items and precious metals can be acquired as a hedge against inflation.

High rates of return on risk free assets, on the other hand, can also be an economic disaster especially if such rates were not anticipated by businessmen and financial institutions.

Statistics compiled by Dun & Bradstreet indicate that business failures in 1981 were almost 50 percent greater than in the recessionary year of 1980 and that business failures increased another 50 percent in[8] 1982. The failure rate in the first four months of 1982--about 80 per 10,000 business--is the highest since 1933, when this country was in the depths of a great depression. Not to be a little more concerned about the adverse impact of high interest rates on business and those thrift institutions with large portfolios of low interest mortgages outstanding might very well force Congress to intervene and severely limit the Fed's autonomy in deciding what should be stabilized.

Even more worrisome is the longer run impact on financial decision making of high rates of return on liquid assets. If petroleum exporting countries with surplus petrodollars, non profit institutions, pension funds and insurance companies that do not have to pay taxes on interest income can obtain an inflation protected return in the vicinity of three or more percent on Treasury bills why should they invest in long term bonds that might depreciate in value or make loans to businesses that might go bankrupt after investing the proceeds in risky projects.

Such concerns in conjunction with the highly uncertain consequences of monetary targeting in an age of financial innovation, I predict, will encourage more persons concerned with monetary policy to re-examine current policies and perhaps better appreciate the wisdom of trying to stabilize the real return on liquid assets at levels which are not so low as to encourage speculation or so high as to discourage investiment that is needed to prevent economic stagnation and political turmoil that might jeopardize the survival of democratic institutions and independent central banking authorities.

Table 1

Annual Growth Rates for Various Definitions of the Money Supply and their Usefulness in Predicting the Average Annual Percentage Change in Nominal GNP in the following Year, 1959-80

	Annual Percentage Change				Following Year Average Annual Growth Rate for Nominal GNP	Forecasting Errors			
Year	M1-B (1)	M-2 (2)	M-3 (3)	L (4)	(5)	M1-B[a] (6)	M-2[b] (7)	M-3[b] (8)	L[b] (9)
1959	.9	3.9	3.8	3.8	3.8	- .5	- .1*	.0*	.0*
60	.6	4.9	5.2	3.9	3.6	- .4	-1.3	-1.6	- .3*
61	3.2	7.3	7.9	6.6	7.7	1.1	.4*	- .2*	1.1*
62	1.8	8.1	9.0	8.2	5.6	.4	-2.5	-3.4	-2.6
63	3.6	8.4	9.3	8.0	6.9	- .1	-1.5	-2.4	-1.1
64	4.6	8.0	8.9	7.3	8.4	.4	.4*	- .5	1.1
65	4.6	8.1	9.2	8.2	9.4	1.4	1.3*	.2*	1.2*
66	2.4	4.7	5.0	5.4	5.8	.0	1.1	.8	.4
67	6.5	9.4	10.7	8.7	9.2	- .7	- .2*	-1.5	.5*
68	7.8	8.1	8.9	9.5	8.1	-3.1	.0*	- .8*	-1.4*
69	3.1	3.8	.8	4.1	5.2	-1.3	1.4	4.4	1.1*
70	5.2	6.4	10.0	6.7	8.6	.0	2.2	-1.4	1.9
71	6.5	13.5	14.6	10.6	10.1	.2	-3.4	-4.5	- .5
72	9.2	13.0	14.0	13.2	11.8	- .8	-1.2	-2.2	-1.4
73	5.5	7.0	11.2	11.7	8.1	- .8	1.1	-3.1	-3.6
74	4.3	5.6	8.5	9.3	8.0	.3	2.4	- .5	-1.3
75	5.0	12.8	9.7	10.2	10.9	2.5	-1.9*	1.2*	.7*
	6.6	14.2	12.0	11.3	11.6	1.6	-2.6	- .4*	.3*
77	8.1	10.9	12.3	12.7	12.4	.9	1.5	.1*	- .3*
78	8.3	8.3	11.2	12.4	12.0	.3	3.7	.8	- .4
79	7.2	8.6	9.2	11.1	8.8	-1.8	.2*	- .4*	-2.3
80p	6.4	9.5	10.7	10.5	11.4	1.6	1.9	.7*	.9*

[a] The actual growth rate for nominal GNP in column (5) minus the growth rate for M1-B in column (1) minus 3.4 percentage points.

[b] The actual growth rate for nominal GNP in column (5) minus the respective growth rates for M-2, M-3 and L in columns (2), (3) & (4).

*The asterisk signifies the same or a smaller absolute forecasting error for the broader monetary aggregate than for M1-B in column (6).

Table 2

The Real Return on 3-Month Treasury Bills and Related Statistics, for the Private Domestic Economy, 1949-81

Year	Average Yield New 3-Month Treasury Bills (1)	Inflation Rate[a] (2)	Real Interest Rate[b] (3)	Growth of Real Output[a] (4)	Annual Percentage Change in Price of Gold (5)
1949	1.1	-1.0	2.1	-1.9	
50	1.2	1.6	- .4	9.1	
51	1.6	7.4	-5.8	5.8	
52	1.8	1.1	.7	3.3	
53	1.9	.9	1.0	4.3	
54	1.0	1.0	.0	-1.8	
55	1.8	1.6	.2	7.9	
56	2.7	3.3	- .6	2.6	
57	3.3	3.5	- .2	1.0	
58	1.8	1.3	.5	-1.6	
59	3.4	2.0	1.4	7.3	
60	2.9	1.4	1.5	1.6	
61	2.4	.6	1.8	1.7	
62	2.8	1.5	1.3	5.5	
63	3.2	1.1	2.1	4.3	
64	3.5	1.0	2.5	6.0	
65	4.0	1.9	2.1	6.8	
66	4.9	3.0	1.9	5.5	
67	4.3	2.7	1.6	2.2	
68	5.3	4.0	1.3	5.1	
69	6.7	4.9	1.8	2.9	
70	6.5	4.5	2.0	- .8	6.4
71	4.3	4.4	- .1	3.0	16.4
72	4.1	3.4	.7	6.6	48.6
73	7.0	5.4	1.6	6.6	72.4
74	7.9	9.4	-1.5	-1.9	65.6
75	5.8	9.7	-3.9	-1.9	-24.6
76	5.0	4.7	.3	6.3	- 3.9
77	5.3	5.6	- .3	6.3	22.3
78	7.2	7.4	- .2	4.7	36.8
79	10.0	8.8	1.2	2.8	126.4
80	11.5	9.2	2.3	- .8	15.1
81p	14.1	9.2	4.9	2.0	-32.6

[a] Average annual growth rates for the implicit price deflator and real output for the private domestic economy.

[b] Column (1) minus column (2).

Table 3

Presidential Elections and Economic Well-being, 1896-1980

Presidential Election Year (1)	Four Year Percentage Increase in Real Personal Consumption Expenditures (2)	President Elected and Political Affiliation (3)	Was the President Elected from Opposing Party? (4)
1932	-11.75	Roosevelt (D)	YES
1920	6.69	Harding (R)	YES
1916	9.28	Wilson (D)	NO
1896	9.42	McKinley (R)	YES
1928	9.81	Hoover (R)	NO
1944	11.00	Roosevelt (D)	NO
1960	11.49	Kennedy (D)	YES
1976	11.75	Carter (D)	YES
1908	12.08	Taft (R)	NO
1952	12.14	Eisenhower (R)	YES
1980	13.27	Reagan (R)	YES
1940	13.58	Roosevelt (D)	NO
1956	15.80	Eisenhower (R)	NO
1972	16.19	Nixon (R)	NO
1964	16.81	Johnson (D)	NO
1968	20.15	Nixon (R)	YES
1936	20.64	Roosevelt (D)	NO
1912	21.54	Wilson (D)	YES
1904	21.59	Roosevelt (R)	NO
1948	22.34	Truman (D)	NO
1900	23.76	McKinley (R)	NO
1924	29.24	Coolidge (R)	NO

Consumption data from John Kendrick, Productivity Trends in the US (Princeton: Princeton University Press, 1961), Table A-IIa, for the period 1892-1940 and the Economic Report of the President, January 1981, for the years since 1940.

FOOTNOTES

[1] Anthony M. Solomon, "Financial Innovation and Monetary Policy," a paper presented before the joint luncheon of the American Economic and American Finance Associations, December 28, 1981, Washington, D.C.

[2] Anthony Solomon, ibid, p. 2.

[3] M. Friedman and D. Meiselman, "The Relative Stability of Monetary Velocity and the Investment Multiplier in the United States, 1897-1958," in Commission on Money and Credit, Stabilization Policies (Englewood Cliffs, N.J.: Prentice-Hall, 1963).

[4] Margaret Yao, "Next on Horizon for Check, Card Users: Access to Home Equity, Life Insurance," The Wall Street Journal, October 13, 1981, p. 40.

[5] Economic Report of the President, January 1980, p. 261.

[6] Monetary Policy Objectives for 1981, Summary of Report to the Congress on Monetary Policy pursuant to the Full Employment and Balanced Growth Act of 1978. Presented by Paul A. Volcker, Chairman, Federal Reserve Board, February 25-26, 1981.

[7] Edward Renshaw, "Fed Urged to Control Real Interest Rates, Not Money Supply," The Money Manager, January 19, 1981, pp. 5 & 20.

Money Versus a Supply-side View of the Inflationary Process

by

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This paper briefly examines the inflationary process from the perspective of the crude version of the quantity theory of money and is then equally pragmatic in using a well known, yet little publicized accounting identity to provide a supply-side view of inflation. The supply-side identity is then used to analyze the effectiveness of economic recessions as a cure for inflation. In the concluding section an incomes policy is outlined which might help to solve the problem of inflation without the pain and economic distortions resulting from restrictive credit.

Money and Prices

Macroeconomics tends to be more empirical and inductive than microeconomics. Many of our most well known macro models have evolved, not from constrained maximization and such fundamental constructs as human preferences and production functions, but from basic accounting identities.

The most well known identity, as far as inflation is concerned, is the equation of exchange which states that the general price level multiplied by real output is equal to the money supply times its velocity.

of circulation. When changes in the underlying variables are fairly small this identity implies that the inflation rate will be equal to the percentage change in the money supply plus the percentage change in the velocity of money minus the percentage change in real output.

$$\%\Delta P = \%\Delta M + \%\Delta V - \%\Delta Q \tag{1}$$

Equation (1) is basically a representation of aggregate demand. When the money supply and its velocity of circulation are constant or changing at steady or offsetting rates, the inflation rate will be inversely proportional to the percentage change in real output. Changes in the quantity of money and other variables which cause the velocity of money to vary will shift this demand equation around and cause the inflation rate to vary, other things equal, if the aggregate supply curve is upward sloping.

Equation (1) can be converted into a much publicized theory of inflation by assuming a vertical supply curve for goods and services that shifts around in synchronization with the velocity of money so that the percentage change in real output will be about equal to the percentage change in the velocity of money. If these assumptions are correct, the inflation rate will be approximately equal to the monetary growth rate.

$$\%\Delta P \approx \%\Delta M \tag{2}$$

Equation (2) is often referred to as the "crude version" of the quantity theory of money. When this equation is used in conjunction with M1-B to explain average annual percentage changes in the implicit price deflator for the private business sector of the U.S. economy from 1960-80, one obtains an average absolute prediction error of slightly more than two percentage points. See column (4) of Table 1.

While the money supply is not a very good predictor of short run changes in the price level, it has tended to increase at about the same rate as the general price level over longer periods of time. For the 33 year period from 1947-79 the growth rate for M1-B and its predecessor M1 over explain the average private sector inflation rate by only three tenths of a percentage point.

The longer run tendency for the price level to increase at about the same rate as the money supply has led many economists to ignore short run prediction errors and assert that the only way to solve the inflation problem is to slow the growth of the money supply.

Tight money does tend to reduce the inflation rate but with a long lag and at a high cost in terms of reduced output and higher unemployment. This point is vividly illustrated by the seven years from 1966-80 when the monetary growth rate was reduced. During these seven years (which are marked by an asterisk in colum (2) of Table 1) the growth rate for real private sector output declined on the average by slightly more than 3.3 percentage points. In only two of these years, 1967 and 1970, was there any decline in the inflation rate and in both cases the amount of deacceleration was rather slight.

One of the best ways to illustrate the delayed effect of tight money on prices is to calculate the year-to-year error terms for equation (2) using the monetary growth rate lagged two years to predict the current inflation rate. This modification of the crude quantity theory has an average absolute prediction error for the 1962-80 period that is about forty percent less than the typical error for the current monetary growth rate. See column (5) of Table 1. The average forecasting error for the growth of M1-B lagged two years, however, is still somewhat greater than the average absolute error for a more naive model which simply assumes that the inflation rate this year will be the same as last year's inflation rate.

The distinguished monetary economist, Milton Friedman, has suggested that a theory should not be judged by the accuracy of its assumptions. The only important test of a theory, in Friedman's view, is whether the theory predicts events accurately. The poor short term forecasting record of the crude quantity theory of money, however, has not caused Friedman to lose faith in one of the economic profession's oldest and most revered models of the inflationary process.

This incongruity has led Professor Ronald Coase to express the view that a theory becomes widely accepted if, rightly or wrongly, a majority of economists perceive that it enhances our understanding of some economic phenomenon and has suggested that there may be a big difference between understanding a phenomenon and economic forecasting.

With this thought in mind Rudolph Penner has recently asked the question, why has supply-side economics failed to capture the hearts of academics? His answer is that supply side economics is not a theory and adds little to our understanding of the world.[1]

Most supply-siders will probably disagree with this conclusion. It doesn't seem likely though that supply-side economics will ever be able to compete effectively with Keynesian economics and the quantity theory of money unless it is formalized in a way that enriches our understanding of such important problems as inflation.

A Supply-Side View of the Inflationary Process

In this section we will be pragmatic and develop supply-side economics from the perspective of a well known, yet little publicized accounting identity. The basic idea is that the share of income going to labor, b, will be equal to total labor compensation divided by national income or domestic product, PQ. Since total labor compensation is equal to the number of hours worked, H, times the hourly wage rate, W, it follows that:

$$b = \frac{WH}{PQ} \qquad (3)$$

and

$$P = \frac{WH}{bQ} \qquad (4)$$

When changes in the underlying variables are fairly small, equation (4) can be rewritten as:

$$\%\Delta P = -\%\Delta b + \%\Delta W - \%\Delta \left(\frac{Q}{H}\right) \qquad (5)$$

Many observers have noted that labor productivity and the share of income going to labor tend to be cyclical in character and inversely related to each other in the short run.[2] From 1947-80 the year-to-year percentage changes in labor's share of gross private domestic product were roughly equal to 1.2 percentage points minus one-half of the average annual percentage change in labor productivity. When this relationship is substituted into equation (5) we obtain:

$$\%\Delta P \approx \%\Delta W - .5\%\Delta\left(\frac{Q}{H}\right) - 1.2 \qquad (6)$$

Equation (6) is able to explain the year-to-year inflation rates for the private business sector with an average absolute error of less than .7 percentage points from 1962-80. The comparable prediction error for the current monetary growth rate is over 2.0 percentage points and for the growth of M1-B lagged two years, 1.3 percentage points. While equation (6) does explain recent changes in the inflation rate quite well, it is questionable whether inflation policy should be based on short run considerations.

In the long run it is not unreasonable to suppose that the share of private sector income going to labor will be fairly constant and that the percentage change in, b, will be about equal to zero. If this assumption is correct the percentage change in the price level will be approximately equal to the percentage change in hourly compensation minus the percentage change in labor productivity:

$$\%\Delta P \approx \%\Delta W - \%\Delta \left(\frac{Q}{H}\right) \qquad (7)$$

The average error terms for this model are presented in column (5) of Table 2 for selected intervals of time which bridge periods of peak prosperity from 1948-79. It will be noted that most of these error terms are negligible and that the crude version of the quantity theory of money only has a smaller error in one period, 1957-60.

There are two periods, 1948-53 and the more recent period from 1973-79, when the share of income going to labor increased by about half a percentage point per year, on the average, and caused equation (7) to over state the actual inflation rate by a comparable percentage.

In all of the other subperiods and for the longer period from 1947-79 the average increase in labor's share of private sector output was in the vicinity of one-tenth of a percentage point or less per year.

In 1947 private sector output was at a low ebb as a result of a major transition from war to peace. Consumers and business enterprises, on the other hand, were still very liquid and eager to replace wornout equipment and stock up on other goods that had been rationed during World War II. By taking advantage of new equipment, a large supply of demobilized labor, and excess demand for most goods and services, firms were able to boost labor productivity 5.8 percent during the recovery year of 1948 and raise prices almost seven percent when hourly compensation was only increasing at an 8.5 percent rate.

The resulting surge in business profits lowered labor's share of gross private domestic product from 67.4 percent in 1947 to only 64.9 percent in 1948. By 1953, however, most excess profits had been competed away allowing labor's share of domestic product to recover to a more normal 66.5 percent.

Labor's share edged up to 66.6 percent in 1957 and 66.7 percent in 1960. It then trended downward slightly to 66.4 percent in 1969 and 66.1 percent in 1973 before surging upward to 67.9 percent in 1979. The recent upward surge in labor's share of gross private domestic product can be largely, if not entirely, explained on the basis of long term pricing arrangements and controls on the price of domestically produced oil and natural gas.

If the acquisition cost of domestic crude oil to U.S. refineries had been equal to the cost of imported oil in 1979 and if the price of all natural gas delivered to distributing companies and large customers such as electric power companies had been equal to the Btu equivalent cost of imported oil, the share of gross domestic product going to labor would have actually declined slightly from 1973-79, other things equal, rather than have increased by about half a percent per year.[3]

Many economists, including some members of the profession who are of a very liberal political persuasion,[4] are now of the opinion that it was short sighted to keep the price of domestically produced oil and gas below the cost of imported oil. Price controls, rather than solve the inflation problem, have tended to suppress inflationary pressures and make the longer run adjustment to a fuel efficient world more painful. Low prices have discouraged energy conservation, restrained the search for additional supplies of oil and gas, and made the U.S. economy more vulnerable to supply disruptions and the monopolistic pricing policies of OPEC.

The battle to decontrol the price of domestically produced oil has now been won. Natural gas, our most important source of domestically produced Btu's, on the other hand, is still grossly under priced and a better bargain at the well head compared to the price of imported oil than was the case before the Iranian revolution.

As the remaining controls on the price of natural gas are removed there should be a tendency for the share of income going to labor to decline to a more normal percentage. This, of course, will worsen the inflation problem and cause equation (7) to under estimate the actual inflation rate for a while.

If controls on the price of domestically produced oil and gas are ruled out as being short sighted and not necessarily in our own best interest then the focus of supply-side anti-inflation policy must logically shift to methods of boosting labor productivity and slowing the growth of labor compensation.

Since the oil embargo of 1973 the growth of labor productivity has slowed from an average increase of more than 2.5 percent to less than one percent. The slump in labor productivity is not something that can easily be attributed to any one phenomenon.[5] There is a great deal of controversey, for example, as to how much of the slowdown can be attributed to higher energy prices[6] and to a reduction in the growth of capital per worker.

Using the technique of national growth accounting, Denison has concluded that only about one-tenth of the decline in the growth rate for national income per person in nonresidential business from 1973-76 should be attributed to changes in capital and land per person employed.[7]

Kopcke, on the other hand, has used a translogarithmic production function to model the nonfarm nonresidential business sector from 1950-1978. He concludes that 50 percent of the decline in labor productivity can be attributed to a slower expansion of the capital stock and that the remainder is due to unspecified structural changes.[8]

For illustrative purposes let us average these two extremes and assume that thirty percent of the decline in labor productivity from 1973-79 was the result of less growth in capital per employed hour. If the tax cuts which were recently enacted are able to restore the growth of capital per hour to former levels, that would enable labor productivity to rebound from .8 percent from 1973-79 to an average growth rate of about 1.4 percent per year.

A word of caution is in order, however. There is a possibility that most of the easy ways of increasing labor productivity have already been exploited and that the U.S. economy is now operating on the retarded position of its aggregate learning curve.[9]

It should also be noted that some types of investment expenditure, such as energy conserving investments which require on going maintenance, can actually reduce labor productivity since saved energy, imported oil, and intermediate inputs that are used up in the production process are either netted out or excluded from domestic product.

Saving in the use of oil and gas by business enterprises has been quite impressive. From 1973-80, U.S. industrial production increased 13 percent while fossil fuel consumption in the industrial sector is estimated to have only increased by about three percent.

Efforts to increase domestic energy production can also lower labor productivity, at least in the short run. The number of oil and gas wells completed in the United States has more than doubled since 1973. Domestic oil and gas production in quadrillions of Btu, on the other hand, was about nine percent less in 1980 than in 1973 in spite of the opening of the Alaska Pipeline. If some remarkable projections by the distinguished petroleum geologist M. King Hubbert continue to track output fairly well, U.S. production of oil will continue to decline in the 1980s and be a drag on the growth of labor productivity.[10]

Our reserves of natural gas are also in a state of decline. In recent years we have only discovered about half as much new gas as was consumed.

Part of the decline in oil and gas production has been offset by an increased use of alternate energy. The use of wood as an energy resource in the U.S. has more than doubled and may have tripled since the Arab oil embargo of 1973. If the latter estimate is correct, the increase in wood consumption would be about sufficient to offset the Btu decline in domestic oil production.

The use of wood to heat factories and homes is a very labor intensive activity in comparison to the use of imported oil for heating purposes. So while it may be socially desirable to invest in more chain saws, one shouldn't expect the greater investment in the petroleum and fire wood industries, which might result from the deregulation of natural gas prices, to have a beneficial effect on labor productivity.

Nor is it clear that the growth of labor productivity can be substantially increased by the simple expe~~n~~dient of deregulating other industries. In the domestic airline industry, for example, one could easily run into such serious congestion effects at some of our busier airports as to make greater investment in that industry counter productive.

Part of the decline in both labor productivity and investment per worker since 1973 can probably be explained on the basis of investments which have helped to accelerate the commercialization of many labor intensive activities which were formerly undertaken by married women in their own homes.

The labor force participation rate for females increased at an average rate of more than one percentage point per year from 1973-79 compared to an average increase of slightly less than one-half a percent from 1947-73.

More working women mean more investments in day care facilities for young children, more investment in nursing homes for elderly adults that cannot care for themselves and more investments in facilities that provide fast foods. None of these rapidly expanding activities are likely to have a very beneficial effect on measured labor productivity.

One would hope that there will be at least a modest rebound in the growth of labor productivity in the remainder of the 1980s. Since a goodly portion of any rebound will be needed to offset the adverse impact of higher prices for natural gas on labor productivity and the share of income going to labor, however, it doesn't seem likely that much progress will be made in slowing the overall inflation rate without a reduction in the growth of labor compensation.

This may not be easy to achieve. Since the late 1950s there has been a marked propensity for the growth of compensation per hour to increase from one business cycle to the next. The growth of compensation one year after a business recession, for example, has trended upward from 2.8 percent after the 1953-54 recession to 4.0, 5.1, 5.7, 7.8 and 10.1 percent after the next five recessions. See Table 3.

Economic Recessions as a Cure for Inflation

A primary method of coping with the problem of inflation in the United States has been to slow the growth of the money supply to the point of inducing an economic recession. Our supply-side identity, equation (5), suggests that this blood letting might reduce the inflation rate by (a) squeezing profit margins and raising the share of income going to labor, by (b) encouraging firms to re-examine production methods and get rid of unproductive employees and obsolete equipment that retard the growth of labor productivity, or by (c) reducing the growth of labor compensation.

Economic recessions do tend to squeeze profit margins and raise the share of national income going to labor. This will lower the inflation rate but only temporarily. Once the economy recovers and profit margins are restored to a more normal level the beneficial effect of a higher share of income going to labor will be lost unless there are favorable spill-over effects on labor productivity or the growth of labor compensation.

Whether economic recessions have an enduring impact on labor productivity is somewhat conjectural. Sagging output and reduced profit margins will no doubt cause many managers to take a harder look at the production process and perhaps discover new ways to improve labor productivity by rearranging production methods, getting rid of unnecessary workers, and by scrapping obsolete equipment with an excessive labor requirement. There is also a possibility that slack demand will enable repairs to be made and new production methods installed that will improve labor productivity in the future.

Sagging output and reduced profit margins, on the other hand, will force many business enterprises to reduce investment spending. This, in turn, will impede the introduction of new equipment that is often needed to bolster labor productivity and perhaps nulify any benefits to be expected from improved maintenance, a thinning out of unproductive workers, and the installation of improved production processes.

It is well known that labor productivity has a tendency to grow at a slower rate during business contractions. The usual explanation for this phenomenon is that some labor is either fixed or otherwise too valuable or costly to fire or layoff during an economic recession. The retention of some underutilized labor has made it possible to increase labor productivity at an above average rate during the first year of most recoveries from an economic recession.

From the fourth quarter of 1948 to the 1st quarter of 1980 the compound average growth of labor productivity from one business peak to a recovery point four quarters after a trough in business activity was about three tenths of a percentage point greater, on the average, than for the 32 year period as a whole. This would suggest that economic recessions can set the stage for a temporary spurt in the growth of labor productivity that will more than compensate for lost productivity during the recession.

The exceptional productivity can probably be attributed to a policy of retaining experienced workers and only utilizing a company's newest and most productive facilities. The social cost in terms of unemployed labor resources that do not have an opportunity to improve their skills, is likely to be very great, however, since the number of hours worked has generally not recovered to a new high one year after a business trough.

Since a modest improvement in the productivity of employed workers at the expense of widespread unemployment is not a very good tradeoff from a societal point of view it is quite clear that economic recessions are a poor way to boost labor productivity. And, since any gain that might have been achieved as a result of the recession will probably be lost by the time the economy recovers to a state of reasonably full employment, it is highly questionable as to whether there are any net gains in productivity to be expected in connection with economic recessions.

The foregoing analysis suggests that if an economic recession is to have a beneficial effect on the inflation rate that will not be lost during the ensuing recovery, it must be the result of a fairly enduring reduction in the growth of labor compensation. Economic recessions, however, are often not very effective in reducing wage inflation. In most cases, the reduction in the growth of labor compensation one year after an economic recession compared to the increase one year before the recession has been less than one percentage point. See Table 3.

The reduction of 1.5 percentage points after the economic recession of 1969-70 is somewhat misleading since labor compensation had been increasing at an annualized rate of about 6.7 percent during the first half of 1971 before President Nixon implemented wage and price controls in August 1971. If the growth of labor compensation had continued to increase at this rate in the absence of controls, the year-after reduction in the growth of compensation would have been about one-half a percentage point or about the same reduction that was achieved after the recessions of 1960 and 1973-75.

The short-lived recession which was experienced during the second quarter of 1980 indicates that it is now possible to have a fairly sharp decline in real output without any beneficial effect on the year-after increase in labor compensation.

One would hope that the current economic recession will be more effective at slowing the growth of wages and fringe benefits than the last recession. The social costs of business recessions, on the other hand, make it desirable to explore other ways to moderate a wage-price spiral.

If labor could be persuaded to accept wage and fringe benefit increases that are no greater than the inflation rate in the preceding year (or better still, compensation increases that are, say, one percent less than the inflation rate in the preceding year) it might be possible to gradually wind down inflation in the U.S. without the pain of economic stagnation and recurring recessions resulting from tight money. All that would then be required to slow the inflation .

rate would be for the growth of labor productivity to be greater, on the average, than any reduction in the share of income going to labor. This condition has always been satisfied during the first few years of a business expansion.

For wage indexing to work, however, the inflation rate must be more nearly a ceiling rather than a floor on the growth of wages and fringe benefits to insure that most of the benefits from improved productivity accrue in the form of price reductions rather than protected wage increases.

Wage indexing combined with wage increases in excess of average productivity has led to uncontrollable price explosions in some industries such as steel and autos, which have been very damaging to their international competitiveness.[11]

It is not very reasonable to expect workers to accept wage indexing in its purest form (or even in a less pure form where some hardship improvements are permitted for workers that have been locked into long term contracts below the previous inflation rate) unless other incomes are also regulated to some extent. If an incomes policy is adopted, I believe that it should be scheduled for termination after a period of, say, two or three years and be sufficiently comprehensive to include the following measures:

(1) To stimulate corporate saving and investment, dividends per share (adjusted for stock dividends and splits) should be limited to an increase that is at least one or two percentage points below the previous inflation rate. A dividend constraint can easily be

defended on the grounds that an effective incomes policy will lower capitalization rates and create a bull market for common stocks.[12]

(2) If the deregulation of natural gas prices is speeded up, some of the extra profits accruing to the owners of developed gas wells should be subject to an excess profits tax to help balance the federal budget, prevent unjust enrichment, and, hopefully, make it possible to have an incomes policy that does not saddle the economy with an elaborate system of price controls. To minimize economic distortions, the emphasis should be on the regulation of incomes rather than prices.

(3) Until the federal budget is balanced, further decreases in the federal income tax should be postponed. In the last decade more than 40 percent of all personal saving has been diverted away from productive investments to the financing of federal deficits. This diversion of resources has lowered the growth of labor productivity and created a very depressed and highly distorted housing market.

(4) If further cuts in personal income taxes are postponed until substantial progress is made at balancing the federal budget, it would then be reasonable to require the Federal Reserve to supply member banks with sufficient reserves to keep the interest rate on Moody's high grade corporate bond index at a less usurious level of, say, not more than one or two percentage points above the preceding year's inflation rate. A low interest rate can be justified on the grounds that long term bond holders are likely to be important beneficiaries of an effective incomes policy.

Having the Federal Reserve stabilize interest rates rather than the growth of the money supply might lead to a temporary surge in cash balances. As the growth of wages and prices slow, however, the demand for money should also increase at a slower rate and eventually validate the crude version of the quantity theory of money without the pain and economic distortions resulting from restrictive credit.

FOOTNOTES

[1] Rudolph G. Penner, "Blame the Politicians, Not Economists," *The New York Times*, December 6, 1981, p.F3.

[2] See for example, Arthur Okun, *Prices and Quantities: A Macroeconomic Analysis* (Washington, D.C.: The Brookings Institution, 1981), pp. 16-25.

[3] This conclusion assumes that natural gas distribution companies paid the same average price for gas as electrical utilities. The calculations are based on data from the *Monthly Energy Review*.

[4] Lester C. Thurow, *The Zero Sum Society* (New York: Penguin Books, 1981), pp. 140-43.

[5] Edward F. Denison, "Explanations of Declining Productivity Growth," *Survey of Current Business*, August 1979, pp. 1-24.

[6] Edward Renshaw, "Energy Efficiency and the Slump in Labor Productivity in the United States," *Energy Economics*, January 1981, pp. 36-42.

[7] Denison, *op cit*, p. 3.

[8] Richard W. Kopcke, "Potential Growth, Productivity and Capital Accumulation," *New England Economic Review*, May/June 1980, p. 24.

[9] Edward Renshaw, "A Note on the Aggregate Learning Curve," *Growth and Change*, October 1979, pp. 10-15.

[10] Perry Renshaw, "US Oil Discovery and Production: The Projections of M. King Hubbert," *Futures*, February 1980, pp. 58-66.

[11] Charles L. Schultze, "Cars, Quotas, and Inflation," *The Brookings Bulletin*, Winter 1981, pp. 3-5.

[12] Edward Renshaw, "Risk Premiums Offer a Basis for Optimum on Stocks," *The Money Manager*, August 28, 1978, p. 2 & 40.

Table 1

Average Growth [illegible]tes for Real Output, Money and the Im[illegible]cit Price Deflator, Private Business S[illegible]or, Selected Years and Periods, 1947-80.

Year or Period	Growth of Real Output	Monetary Growth Rate[a]	Inflation Rate for the Implicit Price Deflator	Predicted Minus the Actual Inflation Rate		
				Current Monetary Growth[b]	Lagged Monetary Growth[c]	Previous Inflation Rate[d]
	(1)	(2)	(3)	(4)	(5)	(6)
1960	1.6	.0	1.4	-1.4		.6
61	1.7	2.1	.6	1.5		.8
62	5.5	2.4	1.5	.9	-1.5	- .9
63	4.3	3.1	1.1	2.0	1.0	.4
64	6.0	3.9	1.0	2.9	1.4	.1
65	6.8	4.2	1.9	2.3	1.2	- .9
66	5.5	4.6	3.0	1.6	.9	-1.1
67	2.2	4.0*	2.7	1.3	1.5	.3
68	5.1	7.0	4.0	3.0	.6	-1.3
69	2.9	6.0*	4.9	1.1	- .9	- .9
70	- .8	3.7*	4.5	- .8	2.5	.4
71	3.0	6.7	4.4	2.3	1.6	.1
72	6.6	7.1	3.4	3.7	.3	1.0
73	6.6	7.3	5.4	1.9	1.3	-2.0
74	-1.9	4.9*	9.4	-4.5	-2.3	-4.0
75	-1.9	4.6*	9.7	-5.1	-2.4	- .3
76	6.3	5.5	4.7	.8	.2	5.0
77	6.3	7.5	5.6	1.9	-1.0	- .9
78	4.7	8.2	7.4	.8	-1.9	-1.8
79	2.8	7.8*	8.8	-1.0	-1.3	-1.4
80	- .9	6.2*	9.2	-3.0	-1.0	- .4
1948-53	4.1	2.8	2.0	.8		
1953-57	2.4	1.8	2.3	- .5		
1957-60	2.4	1.6	1.6	.0		
1960-69	4.4	4.2	2.3	1.9		
1969-73	3.8	6.2	4.4	1.8		
1973-79	2.7	6.3	7.6	-1.3		
1947-79	3.6	3.9	3.6	.3		

[a] Average annual growth rate for M1-B and its predecessor M1.

[b] Column (2) minus column (3).

[c] The monetary growth rate in column (2) lagged two years minus the current inflation rate in column (3).

[d] First differences in the inflation rates in column (3).

* Denotes years when the monetary growth rate was contracted.

Table 2

Average Growth Rates for Money, Labor Compensation, Output per Hour and the Implicit Price Deflator, Private Business Sector, selected Periods, 1948-79

Period	Compensation per Hour (1)	Output per Hour (2)	Implicit Price Deflator (3)	M1-B and M1[a] (4)	Predicted Minus the Actual Inflation Rate: Compensation minus Labor Productivity[b] (5)	Predicted Minus the Actual Inflation Rate: Crude Quantity Theory of Money[c] (6)
1948-53	6.2	3.7	2.0	2.8	.5	.8
1953-57	4.7	2.3	2.3	1.8	.1	- .5
1957-60	4.3	2.6	1.6	1.6	.1	.0
1960-69	5.4	3.1	2.3	4.2	.0	1.9
1969-73	7.1	2.6	4.4	6.2	.1	1.8
1973-79	8.9	.8	7.6	6.3	.5	-1.3
1947-79	6.3	2.6	3.6	3.9	.1	.3

Source of Basic Data: Economic Report of the President, January 1981, pp.276 & 301 and Historical Statistics of the U.S.: Colonial Times to 1957, p. 646.

[a] Compound average growth rate for M1 & M1-B as of June of the year in question.

[b] Column (1) minus column (2) minus column (3). These error terms are approximately equal to the compound average percentage change in labor's share of private sector gross domestic product.

[c] Column (4) minus column (3).

Table 3

Economic Recessions and the Growth of Labor Compensation, Private Business Sector, 1948-80

Date of Business Peak	Trough	Peak-to Trough Percentage Change in Private Business Sector Output (1)	Annual Percentage Change in Hourly Compensation Four Quarters Ending at the Peak (2)	Four Quarters Quarters after the Trough (3)	Difference in Compensation Growth Rates[a] (4)
4th Q 1948 -	4th Q 1949	-4.4	8.4	8.0	- .3
2nd Q 1953 -	2nd Q 1954	-4.1	7.0	2.8	-4.2
1st Q 1957 -	2nd Q 1958	-4.0	7.5	4.0	-3.5
1st Q 1960 -	4th Q 1960	-2.1	5.6	5.1	- .5
3rd Q 1969 -	4th Q 1970	-1.9	7.2	5.7	-1.5
4th Q 1973 -	1st Q 1975	-7.2	8.5	7.8	- .7
1st Q 1980 -	2nd Q 1980	-3.0	9.9	10.1	.2

[a] Column (3) minus column (2)

Monetary Policy, Inflation, and the Aggregate Accelerator Principle

by

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How does one determine whether monetary policy has been good or bad? I don't pretend to have a definitive answer to this question but do believe that some clues can be obtained by examining the behavior of money and short term interest rates relative to the inflation rate and other variables, such as wages and the growth rate for real GNP, which we would like to control.

One of the most disturbing aspects to U.S. monetary policy in the post World War II period is the extreme volatility of the monetary growth rate relative to the inflation rate. This point is illustrated in Table A by subtracting the average annual percentage changes in the implioit price deflator for real GNP in column (2) from the annual December-to-December growth rates for M1 in column (1). It will be noted that these differences, which are shown in column (3), are rather cyclical in character and that most of the differences are in excess of two percentage points. They range from a high of 5.1 percentage points in 1972 to lows of -8.3 percentage points in 1948 and -4.3 percentage points in both 1974 and 1975. The suspicion is that such volatility may help to perpetuate business cycles.

Money is a leading economic indicator but is not a very precise predictor of future income. The signs associated with the money-price growth rate differences in column (3), however, are quite useful in helping to distinguish between generally good and rather poor growth rates for real GNP in the following year. See column (4) of Table A.

Table A
Monetary Policy, Inflation, and the Growth of Real GNP, 1948-81

Year	Annual Percengage Change M1 (1)	Average Annual Percentage Change Implicit Price Deflator for Real GNP (2)	Column (1) Minus Column (2) (3)	Average Annual Percentage Change in Real GNP in the Following Year (4)
1948	-1.4	6.9	-8.3	.5*
1949	- .3	- .9	.6	8.7
1950	4.5	2.1	2.4	8.3
1951	5.6	6.6	-1.0	3.7*
1952	3.8	1.4	2.4	3.8
1953	1.1	1.6	- .5	-1.2*
1954	2.7	1.2	1.5	6.7
1955	2.2	2.2	.0	2.1
1956	1.3	3.2	-1.9	1.8*
1957	- .7	3.4	-4.1	- .4*
1958	3.8	1.7	2.1	6.0
1959	1.6	2.4	- .8	2.2*
1960	.7	1.6	- .9	2.6*
1961	3.2	.9	2.3	5.8
1962	1.8	1.8	.0	4.0
1963	3.7	1.5	2.2	5.3
1964	4.6	1.5	3.1	6.0
1965	4.7	2.2	2.5	6.0
1966	2.5	3.2	- .7	2.7*
1967	6.6	3.0	3.6	4.6
1968	7.7	4.4	3.3	2.8
1969	3.2	5.1	-1.9	- .2*
1970	5.3	5.4	- .1	3.4*
1971	6.5	5.0	1.5	5.7
1972	9.3	4.2	5.1	5.8
1973	5.5	5.7	- .2	- .6*
1974	4.4	8.7	-4.3	-1.1*
1975	5.0	9.3	-4.3	5.4*
1976	6.6	5.2	1.4	5.5
1977	8.1	5.8	2.3	4.8
1978	8.3	7.3	1.0	3.2
1979	7.2	8.5	-1.3	- .2*
1980	6.4	9.0	-2.6	2.0*
1981p	6.3	9.1	-2.8	- .7*

*The average annual growth of real GNP following years when the December-to-December growth rate for M1 in column (1) was less than the Inflation rate in column (2).

These data indicate that there hasn't been an economic recession in the post World War II period that wasn't preceded by an "anti inflationary slowing" of the monetary growth rate below the growth rate for the implicit price deflator. And that, except for the military build-up years of 1951 and 1966, there has always been an economic recession following the implementation of such a policy.

The marked propensity for tight money to end in an economic recession is probably related to the accelerator principle. Since the Korean War, which tended to obscure the accelerator relationship, the average annual percentage change in real gross private fixed investment has been about equal to three times the growth rate for real GNP minus six percentage points. See Table B.

One of the more interesting implications of this relationship is that if real GNP does not increase by at least two percent on an average annual basis, real investment will probably decline and tend to push the economy into an economic recession.

If an economic recession is to be avoided, in other words, the money supply must be allowed to grow rapidly enought not only to accomodate the current inflation rate but a threshold economic growth rate in the vicinity of about two percent or more. When this threshold is not achieved, the slide into an economic recession can be quite precipitous.

It will be noted that there were only three cases of average annual growth rates for real GNP in the range of from zero to two percent during the 34 years of change from 1948-82. See column (4) of Table A. The first of these occured during the economic recession of 1949. The other two cases were immediately followed by the economic recessions of 1958 and 1982. All the other growth rates were either negative (7 cases) or in excess of two percent (24 cases).

Table B

The Accelerator Relationship Between the Average Annual Growth Rates for Real GNP and Gross Private Fixed Domestic Investment, 1955-81

Year	Real GNP (1)	Predicted Investment[a/] (2)	Actual Investment (3)	Predicted Minus Actual Investment[b/] (4)
1955	6.7	14.1	12.7	1.4
1956	2.1	.3	.7	- .4
1957	1.8	- .6	-1.3	.7
1958	- .4	-7.2	-6.5	- .7
1959	6.0	12.0	13.0	-1.0
1960	2.2	.6	.3	.3
1961	2.6	1.8	- .3	2.1
1962	5.8	11.4	8.7	2.7
1963	4.0	6.0	7.1	-1.1
1964	5.3	9.9	7.1	2.8
1965	6.0	12.0	11.3	.7
1966	6.0	12.0	4.4	7.6
1967	2.7	2.1	-2.4	4.5
1968	4.6	7.8	6.9	.9
1969	2.8	2.4	5.1	-2.7
1970	- .2	-6.6	-3.5	-3.1
1971	3.4	4.2	7.1	-2.9
1972	5.7	11.1	-11.5	- .4
1973	5.8	11.4	-8.4	3.0
1974	- .6	-7.8	-8.2	.4
1975	-1.1	-9.3	-12.2	2.9
1976	5.4	10.2	9.4	.8
1977	5.5	10.5	13.9	-3.4
1978	4.8	8.4	7.2	1.2
1979	3.2	3.5	3.1	.4
1980	- .2	-6.0	-7.1	.5
1981	2.0	.0	.1	- .1

[a/] The predicted growth rate for fixed investment is equal to three times the growth rate for real GNP in column (1) minus six percentage points.

[b/] Column (2) minus column (3).

The dearth of moderate growth rates for real GNP and the close association of such rates with economic recessions provides additional support for the accelerator hypothesis that real GNP must increase by about two percent or more to keep investment from falling and the economy from plunging into an economic recession.

Such strong support for the accelerator principle implies that the Fed may not be able to control the growth of real GNP with very much precision. This in turn makes it unwise, I believe, for the Federal Reserve to follow a hyper-active policy of allowing the money supply to grow very rapidly relative to the inflation rate during the early phases of a business expansion and to then go to the opposite extreme of quickly reversing this policy once the economy has built up an inflationary head of steam. Such a policy is likely to stimulate unsustainable rates of economic recovery and be followed by inadvertant economic recessions which perpetuate business cycles.

The remainder of this paper is concerned with the use of gross investment as a proxy for capital input and how the equation for the aggregate accelerator model in Table B can be derived from a Cobb-Douglas production function.

Gross Investment, the Short Run Aggregate Production Function, and the Accelerator Principle

Capital stocks are difficult to measure and are not very useful in helping to explain short run changes in real output unless they are adjusted for utilization. In this note some evidence is presented which suggests that gross investment may be roughly proportional to the flow of services from the aggregate capital stock.

If this hypothesis is correct, gross investment can be used as a proxy for capital input in the aggregate production function. This proxy has the advantage of automatically adjusting for fluctuations in the intensity with which the existing capital stock is utilized. It is available on a timely basis and allows one to avoid many tedious computations and a number of arbitrary assumptions with regard to appropriate bench marks, capital depreciation and utilization rates.

The hypothesis that gross investment is proportional to the flow of services from the capital stock can also be combined with the Cobb-Douglas production function to derive an accelerator relationship for the aggregate economy that is a little more elegant from a theoretical point of view and easier to varify with existing data than Clark's original accelerator model.

Our modified accelerator model suggests that businessmen were actually less willing to invest on the average, at every GNP growth rate level, in the 1974-79 period than was the case during the great depression of the 1930s. Greater economic stability has been achieved, it would seem, not by improving the structural relationship between investment and output but by adopting policies which have helped to bolster and moderate fluctuations in consumer and government spending.

The Basic Model

Since depreciation charges and the incomes from capital services are a primary source of funds for investment purposes it is not unreasonable to suppose that gross investment might be roughly proportional to the flow of productive services from the capital stock. Where I is gross investment, K is capital input, and v is a proportionality factor we have:

$$I = vK \tag{1}$$

and

$$\%\Delta I = \%\Delta K \quad . \tag*{(1)'}$$

Let us also assume a relatively simple Cobb-Douglas production function where Q is aggregate output, b is the exponent for capital input, and A represents improvements in technology and changes in other factors of production such as labor, energy, and material inputs which shift the production function around:

$$Q = AK^b \ . \tag{2}$$

Solving equation (1) for K and substituting the resulting expression into equation (2) allows us to derive the following expression for the aggregate production function:

$$Q = Av^{-b}I^b \quad . \tag{3}$$

Assuming that the proportionality parameter, v, is a constant and that period to period changes in the aggregate input variables, A and I, are relatively small, the short run production function can be specified as:

$$\%\Delta Q \approx \%\Delta A + b\%\Delta I \quad . \tag*{(3)'}$$

In the post World War II period a secular decline in the growth rate for labor productivity has been largely offset by an accelerated growth in the labor force. In the simple production functions which are presented in Table 1 it is assumed that variations in the growth rates for total factor productivity and other inputs will be roughly offsetting so that the percentage change in A will be approximately equal to a constant.

Since the invention of the CES, or constant elasticity of substitution production function by Arrow and associates (1961) it has not been fashionable to fit Cobb-Douglas production functions to aggregate data for the U.S. economy. The pioneering work of Douglas (revisited, 1976), the share of gross corporate income going to labor, and studies by Solow (1965), Bodkin and Klein (1967) suggest, however, that we probably won't be very far off the mark to assume that, b, the percentage increase in output for a one percent increase in capital input, when other inputs are constant, is equal to about one-third.

The regression coefficients which are presented in the first three columns of Table 1 for the average annual percentage change in gross fixed private domestic investment in 1972 dollars are all slightly less than one-third but not significantly different from this value, when the dependent variable is the average annual percentage change in real GNP. While the constant term for the great depression of the 1930s is quite a bit less than the constant terms for the post World War II periods, it will be noted that the sensitivity of GNP to fluctuations in gross investment was almost exactly the same from 1955-78 as from 1930-40.

In column (4) of Table 1 the percentage changes in real GNP are correlated with average annual percentage changes in a capital stock series that was estimated by suming the U.S. Commerce Department's annual estimates of net fixed private domestic investment. The bench mark value for the capital stock of \$800 billion in 1972 dollars for 1947 was derived in an iterative manner with the goal of coming close to maximizing the correlation between the corresponding percentage changes in real GNP and the capital stock. It will be noted that the resulting r^2 for equation (4) is less than a third as large as the r^2 for equation (3) which proxies capital input on the basis of percentage changes in fixed investment.

To obtain as good a fit for the more conventional estimate of the capital stock one must adjust the stock figures for fluctuations in capacity utilization. This is done in column (5) of Table 1 by multiplying our estimates of the capital stock by the Federal Reserve Board's estimate of the average capacity utilization rate in manufacturing in the current year. The resulting parameter estimates are remarkably similar to the results which were obtained in column (3), when the average annual percentage changes in gross fixed private domestic investment were used to explain the growth rates for real GNP.

These results lend additional support to the idea that gross investment might be a useful proxy for capital input in aggregate production functions. In columns (1) and (2) of Table 2 we further explore this possibility by correlating the average annual percentage changes in gross investment with the percentage changes in our capital stock estimates adjusted for changes in capacity utilization. It will be noted that the constant terms in these regressions are very nearly equal to zero and that the regression coefficient for the capital input variable is not significantly different from unity, as one would expect on the basis of equation (1)'.

The production functions in Table 1 are too simplistic to be of much interest from a policy point of view. Renshaw (1981) has found, however, that gross investment can be a useful variable to include in more complicated production functions and supply equations which endeavor to determine whether the recent slump in labor productivity in the United States can be adequately explained on the basis of higher energy prices and reduced investment.

Our concern in this paper is not so much with the production function, per se, as with the possibility of using equations (1) and (2) to derive the accelerator principle.

The traditional accelerator that was developed by Clark (in 1917) and modified by others is based on a primitive production function, the desired capital output ratio, and a definitional statement about investment behavior. In this paper we assume a Cobb-Douglas production function and use the flow of capital services, rather than the desired capital stock, as the intervening link between the production function and our modified statement about investment behavior. The net result is an accelerator relationship for the aggregate economy that is a little more elegant from a theoretical point of view and easier to varify with existing data than Clark's original accelerator model.

Major wars and even minor peace keeping actions like the Korean and Vietnam wars can have a distorting effect upon investment behavior. These events and other types of disturbances which are peculiar to different industries and firms have made it rather difficult to convincingly varify the accelerator principle. Eisner (in 1963), in any event, reported that many investment analysts were unable to find a close relationship between investment and changes in sales and had begun to emphasize other theories of investment behavior.

When equation (2) is solved for capital input and the resulting expression is substituted into equation (1) we obtain:

$$I = vA^{-\frac{1}{b}} Q^{\frac{1}{b}} \qquad (4)$$

and

$$\%\Delta I \approx -\frac{1}{b}\%\Delta A + \frac{1}{b}\%\Delta Q \quad . \qquad (4)'$$

Regression equations representing the percentage change version of this accelerator model are presented in columns (3) through (6) of Table 2 for selected time periods from 1930-79. The regressions for the post World War II period suggest that gross fixed investment has become increasingly sensitive to fluctuations in real GNP.

In the most recent six year period from 1974-79 the accelerator coefficient for real GNP is very nearly equal to the 3.0 value that one would expect on the basis of previous studies which suggest a "b" value of one-third for the capital input variable in a Cobb-Douglas production function.

It will be noted that the accelerator coefficient for the 1974-79 period is almost identical to the accelerator for the great depression of the 1930s. The main difference between these two periods is the larger and more negative constant term for the 1974-79 period. The implication is that businessmen were actually less willing to invest, on the average, at every GNP growth rate level in the mid 1970s than was the case during the great depression. Greater economic stability was achieved not by improving the structual relationship between investment and output but by adopting policies which have helped to bolster and moderate fluctuations in consumer and government spending.

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Table 1

Regression Coefficients for Alternative Specifications of the Short Run Aggregate Production Function for the United States Where the Dependent Variable is the Average Annual Percentage Change in Real GNP, Selected Time Periods 1930-1978.

Independent Variables or Statistic	Regression Coefficients for the Time Periods[a]				
	1930-40	1949-78	1955-78	1955-78	1955-78
Equation Number	(1)	(2)	(3)	(4)	(5)
Average Annual Percentage Change in Gross Fixed Private Domestic Investment	.319 (17.999)	.286 (6.633)	.325 (12.252)		
Average Annual Percentage Change in the Capital Stock[b]				1.797 (2.870)	
Average Annual Percentage Change in the Capital Stock[b] Adjusted for the Average Capacity Utilization Rate in Manufacturing in the Current Year[c]					.361 (11.785)
Constant Term	.763 (1.626)	2.606 (7.383)	2.274 (10.802)	-2.422 (-1.144)	2.184 (9.844)
R-squared	.973	.611	.872	.272	.863
Standard Error of the Regression	1.555	1.746	.902	2.153	.933
Durbin Watson Statistic	2.957	1.518	1.594	1.584	2.000

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[a] The figures in parentheses are "t" statistics.

[b] The capital stock was estimated by suming BEA's annual estimates of net fixed private domestic investment, from 1948-78 and assuming a bench mark value for the capital stock in 1947 of $800 billion in 1972 dollars.

[c] Federal Reserve Board Series for Total Manufacturing.

Table 2

Regression Coefficients for Investment Equations Where the Dependent Variable is the Average Annual Percentage Change in Real Gross Fixed Private Domestic Investment, Selected Time Periods, 1930-79.

Independent Variables or Statistic	Regression Coefficients for the Time Periods[a]					
	1949-78	1955-78	1949-78	1955-78	1974-79	1930-40
Equation Number	(1)	(2)	(3)	(4)	(5)	(6)
Average Annual Percentage Change in Real GNP			2.136 (6.633)	2.686 (12.252)	3.028 (8.312)	3.052 (17.998)
Average Annual Percentage Change in the Capital Stock Adjusted for Capacity Utilization	.9640 (9.7556)	1.0448 (12.4566)				
Constant Term	-.0254 (-.0335)	-.0336 (-.0552)	-4.201 (-2.890)	-5.617 (-5.998)	-6.053 (-4.262)	-2.296 (-1.569)
R-Squared	.7727	.8758	.611	.872	.945	.973
Standard Error of the Regression	3.6485	2.5587	4.772	2.596	2.644	4.810
Durbin Watson Statistic	1.7371	1.6556	1.779	1.656	2.136	2.990

[a] The figures in parenthesis are "t" statistics.

Representative REUSS. Thank you, Mr. Renshaw. Finally, Mr. Roberts.

STATEMENT OF STEVEN M. ROBERTS, DIRECTOR OF GOVERNMENT AFFAIRS, AMERICAN EXPRESS CO., WASHINGTON, D.C.

Mr. ROBERTS. Thank you, Mr. Chairman. It is especially a pleasure for me to be here today on this side of the table, having spent some years on your side of the table.

Representative REUSS. Let me say we look back on our association with great fondness and welcome your homecoming.

Mr. ROBERTS. I appreciate that.

MONETARY AND FISCAL POLICIES NOT COORDINATED

As you know, our economic destiny is not solely dependent on monetary policy. Fiscal policy is just as crucial, and during the past several years, our mix of fiscal and monetary policies have not been very well coordinated. The very serious economic problems we face today are partially the result of a policy mix that is in serious need of reevaluation and change. Our current mix assures little growth in private investment, a slack economy, and high interest rates. This is a situation that must be corrected—the sooner the better.

This can only occur if the Congress, the administration, and the Federal Reserve, given their different responsibilities for economic policy, come together to decide on an economic strategy for recovery with growing employment and lower inflation. All three players are important. It does little good to debate fiscal policy in isolation without input from the Fed. And, the converse is also true of monetary policy. Now is a crucial time for such a debate—while the budget and tax policies are working their way through the Congress and the administration and before the Federal Reserve makes its decisions on policy for next year. As you know, those decisions on monetary policy must be conveyed to Congress by July 20.

Representative REUSS. If I may interrupt you, Mr. Roberts, that's precisely why we are holding these hearings now. The Banking Committees will, of course, hold hearings after July 20 when they know what the Fed's new policy, if a much needed new policy appears, will be.

Is there a representative of the Federal Reserve here in the hearing room?

[No response.]

Representative REUSS. That's a pity, because they might have learned something. Please proceed.

Mr. ROBERTS. Let me turn now to the crux of four issues.

First, interest rates. By any standard of comparison, interest rates are too high for an economy that is in the midst of a recession. If this recession were similar to past recessionary periods, short-term interest rates would be lower by at least 200 to 400 basis points.

WHY ARE INTEREST RATES SO HIGH?

Why are interest rates so high? No one really knows for sure. But there are several things that we can look at.

First, inflationary expectations are clearly important. Participants in financial markets are not convinced that future inflation will be controlled and have, therefore, built into the interest rate structure both an "inflationary premium" and a "risk premium."

Second, many borrowers who have traditionally used the long-term markets have gone short term, bypassing the long-term markets completely. They are now borrowing short from banks and the commercial paper market, and hopefully awaiting the day when rates will be low in long-term markets. This has put upward pressure on the short-term rates.

Third, monetary policy during the past several years has been relatively tight on a consistent basis.

Fourth, large Federal deficits reduce the supply of credit available to the private sector. Our current and prospective deficits are excessive by any standard, regardless of one's views of monetary policy.

If history has taught us anything, it is that the Federal Reserve cannot reduce inflation without constraining the economy. This is a painful lesson that has contributed to both slow growth and high interest rates. We have a basic conflict between fiscal policy and monetary policy. While the Fed is holding the line against inflation, fiscal policy is directed at stimulating the economy. And, even though we have slack in the economy with excess capacity, high unemployment, and lower inflation, many people are afraid that once we turn the corner and come out of this recession, inflation will be rekindled.

These high deficits assure us that interest rates will remain high as the Federal Government, with its huge market power, obtains the credit that it needs by crowding out the private sector borrowers. Therefore, your first priority should be to reduce the out-year Federal deficits, and reduce them sharply.

Another problem that results from continued high interest rates is pent-up demand for credit. The longer high rates continue, the larger pent-up demand will be. The credit sensitive sectors of the economy—small businesses, housing, autos, and agriculture, to name only a few—have been severely hit by high interest rates.

But, once interest rates decline and the recovery begins, it is likely that demand will be revived, inventories will be replenished, and borrowing in the credit markets will increase. This will tend to drive up interest rates. What should be done if the Congress acts to reduce the projected Federal deficits and interest rates do not fall for any appreciable length of time? That's the dilemma we face. That's a difficult question to answer.

NEW MEASURES NEEDED TO CONTROL INFLATION

Let me turn now to inflation. We have had good progress in reducing inflation over the past 2 years. Part of the reason for this is, of course, the slack economy, which is very painful. But, for the most part, the good news recently has come from noncontrollable exogenous shocks, for example, the decline in oil prices, luck on agricultural prices. And, unfortunately, we have falling housing prices, which have helped to slow the CPI because of the disproportionate weight housing is given in that index. But, what will happen once those largely external anti-inflationary shocks vanish? Monetary policy is the only consistent anti-inflation tool we have at this time. But, this is not sufficient and the cost of this single-handed approach is too high in terms of lost output and employment. We need to develop other methods that can work in concert with monetary policy.

TIGHTEN FISCAL POLICY

The single most important thing that can be done is to change the relative emphasis of fiscal and monetary policies. Fiscal policy must be made tighter by some combination of budget cuts and tax increases. This will result in a monetary policy that will be relatively less restrictive, even without a change in the monetary targets.

Another option, and one which is much more difficult, and beyond, I think, the scope of this hearing, is the need for a structural change in the economy. This means a reconsideration——

Representative REUSS. Nothing is beyond the scope of this hearing. [Laughter.]

AND DEVELOP AN INCOMES POLICY

Mr. ROBERTS. We do need a reconsideration of either explicit or implicit incomes policies. We need something to assure us that once inflation is brought down, it is not going to gallop away from us once again. This may include tax incentives, guidelines, some formal tip or some tripartite agreement on slower wage and price increases. Such programs are very important. They are not a substitute for fiscal and monetary restraint, but they would be very complementary to such restraint. I encourage this committee to continue exploring those complements to monetary policy.

MONETARY POLICY, POST-1979

Now let me turn to what I consider the crux of this hearing and the crux of monetary policy, and that is the Fed's actions after October 1979. At that point, the Fed said it would no longer attempt to control short-term interest rates, that henceforth, it would focus its policies on controlling the monetary aggregates. This change has left to the financial markets the job of setting interest rates. It has also resulted, in my view, in too much emphasis being placed on short-term control of the monetary aggregates. Some observers believe that this increased emphasis on the aggregates can be viewed as a means for the Fed to avoid political responsibility for the high interest rates that accompany a restrictive monetary policy. I think this hearing is evidence that that is not true.

Almost all economists will agree that monetary growth over the long run has important effects on the economy and inflation. That is one reason why the Congress in 1975 through the resolution which you had a great deal to do with, and in 1978 in the Humphrey-Hawkins Act, instructed the Federal Reserve to report their policies in terms of rates of growth of the monetary and credit aggregates. Moreover, that is the reason why the Humphrey-Hawkins Act specified that policy targets should be given on an annual basis—to minimize attention to short-term changes in money growth.

TOO MUCH ATTENTION ON SHORT-RUN TARGETS

The good intentions—to look at long-term monetary growth, however—have largely been lost. The monetarist approach adopted by the Fed and endorsed by the administration has directed attention to short-term monetary control. We now have a situation where the financial markets, the press, and even average Americans anxiously await Friday afternoon announcements by the Fed of the most recently experienced weekly change in M_1—as if it had some important message about the future well-being of the economy. This is not true. The weekly data are notoriously bad. The situation has gotten out of hand. The emphasis that has been placed on short-term control of M_1 has been detrimental, not helpful.

HAS DESTABILIZED INTEREST RATES

Since October 1979, interest rate volatility has increased dramatically. This volatility affects interest rates and economic decisions in every nook and cranny of our economy because so many interest rates are now tied to money market rates. The increased use of Treasury bill rates as the key market rate from which other rates are determined makes the situation even more serious now and potentially dangerous in the future. Steps need to be taken to dampen interest rate volatility as well as to reduce interest rates. One such step, a modification of the way M_1 data are reported, is now under consideration at the Fed. I urge you to ask the Fed to stop this weekly money market game, to stop publishing weekly data, and to go to a single monthly M_1 number that would be more meaningful.

I also believe that a reexamination of October 1979 changes in operating procedures is clearly needed. For a long time, participants in the financial markets wanted the Fed to adopt a more monetarist approach. They said that monetary control would work to lower interest rates. But that has not happened, even though actual M_1 growth was below target last year and the Fed has consistently said it intends to gradually reduce the rates of growth of the monetary aggregates and has set its targets accordingly. One would have suspected that the financial markets would be happy with Fed behavior and that the Fed's credibility has been restored. But the financial markets have not been consistent. During the past year rates have remained high whether the Fed's policy is viewed as becoming looser or tighter based on recent money growth statistics.

Before October 1979, the Fed directed its policy at controlling short-term interest rates. The shift appears in retrospect to have gone too far. Money market conditions and short-term interest rates do make a tremendous difference to our economy. Moreover, targeting almost exclusively on M_1 is tenuous at best because of the problems involved in defining that aggregate.

MONEY TARGETING HAMPERED BY FINANCIAL INNOVATION

Deregulation of the financial markets and financial innovations are producing important and popular money substitutes faster than they can accurately be incorporated into the definition of money. Indeed, the appropriate definition of money—M_1 in particular—has proven to be quite elusive. Nevertheless, the Fed continues to focus on this measure. At this juncture, the Fed might be better served to move partially back to the old regime—to pay attention both to the growth in monetary and credit aggregates and to credit market conditions.

I believe it was a former chairman of this committee who used to say that monetary policy was too important to be left to central bankers. Analogously, interest rates may be too important to the economy to have them set entirely by financial market participants.

Finally let me talk about coordinated policies again. We now have a condition of great uncertainty in our financial markets and throughout the private sector. As a consequence, many businesses and personal decisions are either being postponed or modified. This is not satisfactory. Many observers in Washington are hopeful that once action is taken on the budget and future year deficits. inflationary expectations will change dramatically, interest rates will come down, and a brisk recovery will begin. I think that would be just fine. But I am concerned that that scenario may not be correct. If it is not correct, something new must be tried.

What may be needed is a broader consensus on economic policy involving the administration, the Congress and the Fed sitting down together at the same time to hammer out a new strategy for recovery with growing employment and lower inflation.

A step in that direction was taken in the budget resolution the Congress is now considering. I will not read the resolution, even though it is in the text, but I will say that I think that that language is very, very useful. It does not challenge the Fed's traditional independence. Yet, at the same time, it sends them a strong signal that fiscal and monetary policies need to be coordinated.

FED AND CONGRESS MUST WORK TOGETHER

However, something is still lacking. What is still needed is a way for the Fed to "buy into" the new program. Given the nature of our system, there may well be differences of opinion as to whether the deficits have been reduced "in a substantial and permanent way," which is the language of the resolution. If the Fed does not agree with the decisions made on the budget and future deficits, coordination of fiscal and monetary policies may again fail. Before that happens, someone, perhaps this committee—and I'm glad to see that these hearings are being held—should explicitly ask the Fed just what it would take in terms of "fiscal responsibility and reduced projected deficits" to have the Fed not only reevaluate the monetary targets, but how such changes would affect their monetary policies. Thank you, Mr. Chairman.

[The prepared statement of Mr. Roberts, together with the market letter referred to, follows:]

PREPARED STATEMENT OF STEVEN M. ROBERTS

Thank you Mr. Chairman.

My name is Steven M. Roberts and I am Director of Government Affairs for the American Express Company. Prior to taking this position, I was Chief Economist for the U.S. Senate Committee on Banking, Housing and Urban Affairs. I have also served on the staff of the Board of Governors of the Federal Reserve System. I appreciate this opportunity to appear before you today to discuss monetary policy, the conduct of which is vital to the well being of our economy.

It is important to recognize from the very start that our economic destiny is not solely dependent on monetary policy. Fiscal policy is just as crucial. Moreover, it should be clear to any observer of economic policy that during the past several years our mix of fiscal and monetary policies have not been very well coordinated. The very serious economic problems we face today are partially a result of a policy mix that is in serious need of re-evaluation and change. High interest rates are a message from our financial markets -- fiscal policy is too loose and monetary policy is too tight. Our current fiscal and monetary policies assure little growth in private investment, a slack economy, and high interest rates. This is a situation that must be corrected. The sooner the better.

This can only occur if the Congress, the Administration, and the Federal Reserve, given their different responsibilities for economic policy, come together to decide on an economic strategy for recovery with growing employment and lower inflation. All three players are important. It does little good to debate fiscal policy in isolation without input from the FED. The converse is also true of monetary policy. Now is the crucial time for such a debate -- while the budget and tax policies are working their way through the Congress and the Administration and before the Federal Reserve makes its decisions on policy for next year. As you know those decisions on monetary policy must be conveyed to Congress by July 20.

The remainder of my testimony will discuss four issues. First, high interest rates and the steps which must be taken to reduce them. Second, the fact that inflation is still a serious problem even though we have made significant progress in reducing the inflation rate. Third, the operating procedures adopted by the Federal Reserve in October 1979 should be re-examined in light of recent experience. Fourth, the Administration, the Congress, and the Federal Reserve need to reach an economic accord that will set in place a strategy for economic growth, reduced unemployment and inflation, and lower interest rates.

Interest rates are too high. By any standard of comparison interest rates are too high for an economy that is in the midst of a recession. If this recession were similar to past recessionary periods short term interest rates would be lower by 200 to 400 basis points. The combination of lower rates, last year's tax reductions, and the additional 10 percent cut in personal income tax rates scheduled for July 1 would set the tone for a healthy recovery.

Why are interest rates so high? No one really knows for sure. Several things, however, are likely contributors. First, inflationary expectations are clearly important. Participants in financial markets are not convinced that future inflation will be controlled and have, therefore, built into the interest rate structure an "inflation premium" and a "risk premium". Second, many borrowers who traditionally have used the long-term markets have gone short-term. They are now borrowing short from banks and the commercial paper market, and waiting until some future date when long-rates are lower. This has put upward pressure on short-term rates. Third, monetary policy during the past several years has been "relatively" tight on a consistent basis. Fourth, large federal deficits reduce the supply of credit available to the private sector. Our current and prospective deficits are excessive by any standard, regardless of one's view of monetary policy.

Unfortunately, economic policy has left the job of controlling inflation exclusively to monetary policy. If history has taught us anything it is that the Federal Reserve alone cannot reduce inflation without constraining the economy. This is a painful lesson that has contributed to both slow growth and high interest rates. We have a basic conflict between fiscal policy and monetary policy. While the Fed is holding the line against inflation, fiscal policy is directed at stimulating the economy. And, even though we have a slack economy with excess capacity, high unemployment and lower inflation, people are afraid that once we turn the corner and come out of the recession inflation will be rekindled. Part of the reason for this expectation is the prospect of extraordinarily high deficits for the next several years. These high deficits assure us that interest rates will remain high as the Federal government, with its huge market power, obtains the credit that it needs by crowding out private sector borrowers. Therefore, your first priority should be to reduce out-year federal deficits and reduce them sharply.

Another problem that results from the continued high interest rates is pent-up demand for credit. The longer high rates continue the larger the pent-up demand will be. The credit sensitive sectors of the economy -- small business, housing, autos, and agriculture to name a few -- have been severely hit by high interest rates. Both output and credit demands in these sectors have been curtailed. But, once interest rates decline and the recovery begins it is likely that demand will be revived, inventories will be replenished and borrowing in the credit markets will increase. This will tend to drive interest rates back up. Therefore, an important question that must be addressed is what should be done if Congress reduces future projected deficits and interest rates do not fall for any appreciable length of time? Put another way, even if interest rates decline sharply, how can they be kept from going back up just as sharply? The answers to these questions are indeed difficult. But if recovery is to be sustained answers must be found.

High interest rates have also contributed to a strengthening of the U. S. dollar abroad. This tends to make our exports relatively more expensive, reducing our competitiveness and decreasing output.

Anti-inflation policies. In recent months inflation has subsided significantly. Part of the reason for this good news is the slack economy, which itself is bad news. Inflation usually declines during recessions so this is no surprise. But, for the most part the good news on inflation has come from non-controllable external shocks. For example, the decline in oil prices and some luck on agricultural prices. Also, we have had falling housing prices which have helped slow the CPI because of the disproportionate weight housing is given in that index. But, what happens once these largely external anti-inflationary shocks end?

Monetary policy is the only consistent anti-inflation tool we have at this time. But, this is not sufficient and the cost of this single-handed approach is too high in terms of lost output and employment. We need to develop other methods that can act in concert with monetary policy. The Administration and the Congress have a responsibility to do this now, before we start out of the recession so that inflationary expectations can be reduced. The most important thing that can be done is to change the relative emphasis of fiscal and monetary policies. Fiscal policy can be made tighter by some combination of budget cuts and tax increases. The result will then be that monetary policy will be relatively less restrictive even without a change in monetary targets. Another option which is harder, is the need for structural change in the economy. This may mean a reconsideration of either explicit or implicit incomes policies -- tax incentives, guidelines, tax-based income policies, or tri-partite agreement on slower wage and price increases. Such programs are not a substitute for fiscal and monetary restraint. They would, however, be complementary to such restraint.

FED policy post October 1979. In October 1979 the FED announced that it would no longer attempt to control short-term interest rates, that henceforth it would focus policy on controlling the monetary aggregates. This change left to the financial markets the job of setting interest rates. It also has resulted in too much emphasis being placed on short-term control of the monetary aggregates. Some observers believe this increased emphasis on the aggregates can be viewed as a means for the Fed to avoid political responsibility for the high interest rates that accompany a restrictive monetary policy.

Almost all economists will agree that monetary growth over the long-run has important effects on the economy and inflation. That is one reason why the Congress in 1975 and again in 1978 in the Humphrey Hawkins Act instructed the Federal Reserve to report their policies in terms of rates of growth of the monetary and credit aggregates. Moreover, that is the reason why the Humphrey Hawkins Act specifies that policy targets should be given on an annual basis -- to minimize attention to short-term changes in money growth. In fact, you may recall that part of the Humphrey Hawkins debate on monetary policy issues dwelt on whether annual targets were sufficient or whether multi-year monetary objectives should be announced consistent with the multi-year objectives for GNP, employment, prices and the Federal deficit that the President must specify.

The good intentions -- to look at long-term monetary growth -- have largely been lost. The monetarist approach adopted by the Fed and endorsed by the Administration has directed attention to short-run monetary control. We now have a situation where the financial markets, the press, and even average Americans anxiously await the Friday afternoon announcement by the Federal Reserve of the most recent weekly change in M-1 as if it had some important message about the future well-being of the economy. This is not true. The weekly data are notoriously bad. The situation has now gotten out of hand. The emphasis that has been placed on short-term control of M-1 has become detrimental, not helpful. Since October 1979 interest rate volatility has increased dramatically. This volatility affects interest rates and economic decisions in every nook and cranny in our economy because so many interest rates are now tied to market rates of interests. The increased use of treasury bills rates as the market rate from which other rates are determined makes the situation serious now and potentially dangerous in the future. Steps need to be taken to dampen interest rate volatility. One such step, a modification of the way M-1 data is reported is now under consideration at the FED. I would urge you to ask the FED to stop reporting weekly data and to go to a single monthly average M-1 figure, once each month, as quickly as possible.

A reexamination of the October 1979 change in operating procedures is also clearly needed. For a long time participants in the financial markets wanted the FED to adopt a more monetarist approach. They said that monetary control would work to lower interest rates. But that has not happened even though actual M-1 growth was below target last year and the FED has said consistently that it intends to gradually reduce the rates of growth of the monetary aggregates and has set its targets accordingly. One would have suspected that the financial markets would be happy with FED behavior and that the FED's credibility has been restored. But the financial markets have not been consistent. During the past year interest rates have remained high whether the FED's policy is viewed as becoming looser or tighter based on recent money growth statistics.

Before October 1979 FED policy attempted to control short-term interest rates as a means for implementing monetary control. The FED's shift in 1979 appears in retrospect to have gone too far. Money market conditions and short-term interest rates do make a difference to the economy. Moreover, targeting almost exclusively on M-1 is tenuous at best because of the problem involved in defining that aggregate. De-regulation and financial innovations are producing important and popular money substitutes faster than they can be accurately incorporated into the definition of money. Indeed, the appropriate definition of money -- M-1 in particular--has proven to be quite elusive. Nevertheless FED policy continues to focus on this measure. At this juncture, the FED might be better served to move partially back to the old regime -- to pay attention both to the growth in the monetary and credit aggregates and to credit market conditions. I believe it was a former chairman of this Committee who used to say that monetary policy was too important to be left to central bankers. Analogously, interest rates may be too important to the economy to have them set entirely by financial market participants.

Coordinated policies for recovery. Economists disagree as to just when the economy may turn the corner and enter recovery. Uncertainty pervades the private sector and as a consequence many business and personal decisions are being either postponed or modified. This is not a satisfactory situation. Many observers in Washington are hoping that once action is taken on the budget and future year deficits, inflationary expectations will change dramatically, interest rates will come down, and a brisk recovery will begin. I think that this would be fine. But, I am concerned that that scenario may not be correct. If it is not correct something new must be tried.

What may be needed is a broader consensus on economic policy involving the Administration, the Congress, and the

Federal Reserve sitting down to hammer out a new strategy for recovery with growing employment and lower inflation.

A step in that direction has been made in the pending budget resolutions. Section 306 of the Senate resolution contains a sense of the Congressional resolution which says that "if the Congress acts to restore fiscal responsibility and reduces projected budget deficits in a substantial and permanent way, then the Federal Reserve Open Market Committee shall reevaluate its monetary targets in order to assure that they are fully complementary to a new and more restrained fiscal policy." I think that this language is useful. It does not challenge the FED's traditional independence. Yet, at the same time, it does send them a strong signal that fiscal and monetary policies need to be coordinated.

Something, however, is still lacking. What is still needed is a way for the FED to "buy into" the program. Given the nature of our system, there may well be differences of opinion as to whether the deficits have been reduced in "a substantial and permanent way". If the Fed does not agree with the decisions made on the budget and future deficits coordination of fiscal and monetary policies may again fail. Before that happens someone, perhaps this Commmittee, should ask the FED just what it would take in terms of "fiscal responsibility and reduced projected deficits" to have the FED not only reevaluate but also modify their monetary targets.

Mr. Chairman, I have appended to this testimony a market letter entitled, "What the April 1982 Tape is Telling Us." It was written by one of my colleagues, Mr. Jacob C. Winter of Shearson/American Express. I think you will find it quite interesting.

Thank you.

SHEARSON
AMERICAN EXPRESS

What The April 1982 Tape Is Telling Us

J.C. Winter

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In April, the Federal Reserve further tightened its deadly stranglehold on the economy by forcing the federal funds rate to go up another 10%, from 14% to 15½%, but our commercial banks were satisfied to leave the prime rate at the near-disaster level of 16½%.

The Dow Jones Industrial Average gained 25 points in May, from 823.27 to 848.36, for a gain of more than 52 points since bottoming out at 795.85 on March 17th.

Since the DJIA is expressed in highly inflated dollars, a DJIA of less than 1000 is telling us and will continue to tell us that the economy is in deep trouble. However, the stock market nosedive appears to be over and if the federal funds and prime rates go no higher than 16½% we could now see the beginnings of a slow economic recovery with a slowly improving stock market.

By now, just about everyone is complaining about the murderous interest rates which refuse to go down, but nowhere do we see any official recognition of the fact that the fundamental cause of all our economic difficulties is foolish monetary restraint which feeds the inflation it is supposed to fight and tosses the economy into a severe recession some are now calling a crypto-depression.

I continue to believe that long-term interest rates will remain sky-high and any economic recovery will be modest and short-lived unless foolish monetary restraint in the form of double-digit short-term interest rates is either relaxed or abandoned. The underlying rate of inflation remains 12%. The lower rates of inflation announced for the last several months were not produced directly by monetary restraint as monetarists and administration officials would have you believe. Rather, monetary restraint fed inflation until it also tossed the economy into a severe recession or crypto-depression, which has temporarily impaired the ability of workers and businessmen to protect their shares of the economic pie by increasing wages and selling prices. As and when the economy starts to recover, we can expect the recorded rate of inflation to return to double-digits if foolish monetary restraint is not relaxed.

When Will The Economy Come Roaring Back

Just two months ago, Treasury Secretary Regan promised that the economy would "come roaring back" in late spring. Now, after the index of leading economic indicators declined again in March, the 11th consecutive monthly decline, we are being told to wait until late summer. Twice in April Donald Regan admitted that the nation's economy was "dead in the water."

With joblessness at 9%, the highest in 40 years and perhaps still increasing, we are in the most severe and longest recession since the Great Depression of the 1930s from which we recovered only with the help of World War II and total abandonment of monetary restraint for the duration.

Pessimism is up, and for good reason. Neither economic nonsense theory nor the various quick-fixes proposed by our politicians will do any good, because none of them recognize the fundamental fact that monetary restraint is a complete disaster, the higher the dosage, the worse the economy, a preposterous idea that has never worked since it was revived in 1951, more than thirty years ago.

Projected 1983 Deficit of $182 Billion

In last month's letter I suggested that the combined effect of Paul Volcker's folly and estimated IRA tax savings could easily produce annual federal deficits exceeding $200 or $250 billion, and that replacement of Volcker in 1983 will make no difference because no successor will be confirmed unless he is committed to the same folly.

The April 29th breakdown of federal budget negotiations produced agreement that the 1983 deficit would be around $182 billion unless President Reagan and Congress reduced expenditures, increased taxes or both. Not one word about monetary restraint although President Kennedy's top economist, James Tobin, continued to urge the Fed to ease up on monetary policy.

There appeared to be agreement also that it would be desirable to reduce that 1983 deficit to $100 billion. As one thoroughly confused journalist put it, the problem confronting Congress is how to produce an $82 billion backage of spending cuts and new revenue to bring the deficit for fiscal 1983 down from $182 billion to $100 billion.

It takes very little thinking to realize that a package of $82 billion spending cuts and new revenue would produce nowhere near an $82 billion reduction in the federal deficits, but who in Congress, or elsewhere, is prepared to do a little thinking?

What Causes Federal Deficits?
The only correct answer is that the federal deficit is equal to the amount by which federal expenditures exceed federal revenues. But it is sheer nonsense to suggest that an $82 billion reduction in expenditure (one Republican solution), or an $82 billion increase in taxes (one Democratic solution), or some sort of combination of expenditure cuts and tax increases adding up to $82 billion, would accomplish the stated objective. Yet, that is what almost everybody takes for granted.

As I explained in some detail in last month's letter, reducing federal expenditures sounds like a good way to reduce federal budget deficits, but that's not the way it works. If the federal government is not going to make a certain $82 billion array of expenditures, a lot of employees and businessmen at the other end of these aborted transactions are not going to receive that income and pay taxes on it. Corporate and individual income taxes will fall by a considerable amount. A chain reaction aborting further economic transactions would further reduce private sector expenditures and federal tax revenue unless, somehow, the full federal expenditure reduction was offset by increased private sector expenditures producing offsetting corporate and personal income increases and offsetting tax revenue increases. Continuing monetary restraint would make that impossible.

Similarly, a legislated tax increase may produce little or no additional tax revenue if foolish monetary policy and other economic factors remove a few million more workers from the status of taxpayers and produce corporate bankruptcies and losses resulting in tax refunds instead of tax revenues.

A small, indeterminate portion of federal expenditure reductions and tax increases might wind up as a federal budget deficit reduction, but not very much.

The major cause of federal budget deficits is monetary restraint, because it feeds inflation, tosses the economy into a recession, and produces

1. Huge increases in federal interest expense.
2. Huge increases in federal welfare disbursements as unemployment increases.
3. Huge decreases in federal tax revenue as corporate profits and taxable wages take a nosedive.
4. Huge increases in other mandated federal expenditures as a higher-than-anticipated rate of inflation produces higher cost-of-living adjustments and higher costs for national defense, medicare, etc.

Does Reduced Inflation Reduce Federal Revenue?
In his April 29th TV address, President Reagan told us that reduced inflation was reducing federal revenue and increasing the budget deficit. No reasoning to support this curious conclusion was offered. At this time we can only suggest that the confusion is mounting.

Reaganomics Update
Monetary restraint remains the fatal ingredient, more than offsetting the beneficial effect of the delayed and watered-down tax cut.

With four years of failure in prospect, President Reagan has now made the following admission: "If we do not cut spending more, and if we do not protect the people's tax cut, this administration will preside over the largest deficit and the highest personal tax burden in American history."

Because President Reagan still does not realize that foolish monetary restraint is destroying his hopes we can with some confidence correct his comment to more accurately reflect what's in store for us, as follows:

"Whether or not we cut spending more, and even if we protect the people's tax cut, the Reagan administration will preside over the largest deficit in American history, simply because none are so blind as those who will not see."

May 3, 1982 DJIA 848.36
LC-5-2

Additional information available upon request

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THE DIRECTIVE TO FEDERAL RESERVE IN BUDGET RESOLUTIONS

Representative REUSS. Thank you, Mr. Roberts, gentlemen. Let me ask you first about the directive to the Federal Reserve contained in both the Senate and the House budget resolutions, on the assumption that something will come of them. That language as repeated in Mr. Roberts' prepared statement as is follows: "If the Congress acts to restore fiscal responsibility and reduces projected budget deficits in a substantial and permanent way, then the Federal Reserve Open Market Committee shall reevaluate its monetary targets in order to assure that they are fully complementary to a new and more restrained fiscal policy."

Mr. Roberts, I'm glad you think that language is useful, because I do. It tells the Federal Reserve that whatever else it does, there is one monetary target that clearly has to be reevaluated, and that is the unseemly 2½- to 5½-percent target for M_1. However fragile M_1 is, it is quite apparent that keeping a 2½- to 5½-percent target range on it, given the fact that the Fed so far this year has been well over its target—2 to 3 percentage points over its ceiling—will spell disaster if it is continued.

SHOULD THE 2½- TO 5½-PERCENT MONEY TARGET BE ALTERED?

So, would you agree that while the Federal Reserve retains considerable ultimate discretion under this proposed congressional budget resolution directive to the Fed, nevertheless it would have to do something about its 2½- to 5½-percent M_1 target, whatever else it does? Mr. Roberts.

Mr. ROBERTS. Yes; I would agree by the language of the resolution that the FOMC will have to look at that target. If I were asked what I would do with the target, I would say I would eliminate it completely. I think M_1 is an uninteresting number. There are so many new things happening that are included in M_2 but not in M_1 that I think it is folly to pay any attention to M_1 at all.

Representative REUSS. Meanwhile, however, as long as you have it, as long as it is the principal statutory response of our central bank to the Humphrey-Hawkins Act, you create trouble by erecting standards which the erectors show no sign of following, do you not?

YES, BUT M_1 IS NOT A GOOD POLICY INDICATOR

Mr. ROBERTS. I agree with that, but I think it is more important for you, members of this committee, and members of both Banking Committees to say to the Fed if M_1 is a meaningless number, if there are so many things happening like NOW accounts and money market funds and you can't measure what M_1 is, then don't tell us about it. Tell us something interesting.

Representative REUSS. True. The budget resolution might have enjoined upon the Fed a requirement that it go cold turkey on M_1 or cold turkey on the aggregates. It has not done so and to be politically realistic, I think the language in the budget resolution which has passed the Senate and which is identical in the House is the only congressional monetary game in town for the month of June and thereafter. That being so, while you hope that the Fed would go cold turkey on monetarism in general and on M_1 in particular and I know your hope is joined by at least Mr. Nichols here, it would be at least a minimum good, would it not, for the Fed to free itself from its 2½- to 5½-percent M_1 corset?

Mr. **Roberts**. Let me correct one thing. I don't think the Fed should go cold turkey on monetarism. I think they should go cold turkey on M_1.

Representative **Reuss**. Let me correct my question accordingly.

M_2 AND M_3 BETTER INDICATIONS OF CREDIT

Mr. **Roberts**. M_2 and M_3 do tell us something about what's going on. As long as they look at the growth of M_2 and M_3 and credit—and credit is an often ignored part of the Humphrey-Hawkins and part of the 1975 resolution—I think that the 2½- to 5½-percent range of M_1 has by the Fed in its last publication of its minutes from the March meeting been discounted heavily. They have said that the growth of M_1 is higher than the 2½- to 5½-percent range because of a liquidity premium that people have placed on the demand for money. I think that that's true. I think that that's one reason why NOW accounts have grown so quickly. I think that rather than change the 2½- to 5½-percent range given the current definition that they should explain and maybe go back to an M_{1B} definition which takes into account the changes that NOW accounts have implied.

Representative **Reuss**. Well, whatever the options available to them, and they are myriad, would you not agree that it is not good policy for the Fed to include as the No. 1 item on the smorgasbord M_1 and then disregard the target ranges which it has posited for it, saying sort of off the record, "Well, everybody understands that we are going to make a mockery of our own targets and it doesn't do any harm."

BUT REGARDLESS OF MEASURE, FED IS RESPONSIBLE

Mr. **Roberts**. I agree with that entirely. I also think that it is very important that there be some handle on monetary policy to look at. The Fed has to be held accountable. I think M_2 is a better measure right now. I think that credit demands need to be considered also. But they must be held accountable. That's why I would not abandon at this point monetarism completely.

Representative **Reuss**. Or the use by Congress of monetary targets?

Mr. **Roberts**. Or the use by Congress of the monetary targets or of the report.

THE NEED FOR REALISTIC MONETARY TARGETS

Representative **Reuss**. Mr. Nichols, address yourself to the lesser and the greater proposition; namely, the lesser one: whatever else happens, is the Fed justified in thumbing its nose at Congress in the event this resolution is passed and saying we are going to keep on with our 2½- to 5½-percent M_1 target though they say to other people, "Don't worry, we aren't really going to do this." We are just going to keep on kidding the markets by, as I have put it in the past, voting dry but drinking wet. They have a very austere monetary target that the Wall Street Journal editorial writers are enchanted with and at the same time, they have a sloppy 9 percent new growth monetary policy that would have delighted the former chairman of the Joint Economic Committee whom you referred to.

So, address yourself both to that narrow proposition and the broader: Is monetarism dead? Should we do away with the aggregates, on which Mr. Roberts has made it quite clear. He says "no". Keep whatever monetary medicine Congress distilled into Humphrey-Hawkins, but get rid of the narrow deceptive M_1 corset.

Mr. NICHOLS. If the Federal Reserve is to maintain targets, it should hit them. I believe credibility of policy is something that is valuable into the future and they should not say one thing and do another. That's terrible performance on the fiscal side or the monetary side. They have to be consistent in the long run. If they are going to keep money growth targets, they should be raised at the present time, raised in response to this very appropriate request from Congress.

LOWER INTEREST RATES WILL CUT THE DEFICIT AND VICE VERSA

Mr. NICHOLS. Congress has taken a step. Congress would be, with an appropriate budget, taking a step to cut down the deficits with the budget resolution. This would bring down interest rates and give the Fed a chance to do the same thing; their piece on interest rates will also help the deficits enormously. One of the major contributors to high deficits at the moment are high interest costs. If they are brought down, there would be an immediate effect on future deficits.

Another reason we have enormous deficits at the moment is this recession, and lower interest rates will help us out of the recession. If we were out of the recession, with an unemployment rate of 6 to 6½ percent, we would have a deficit $100 billion smaller.

The Fed has a lot to do with the deficit by their own actions. They would be complementary to the actions of the Congress in bringing down this deficit and interest rates with it. In the long run, as you know, I don't think the monetary aggregates have been a useful guide to policy. I think we misled ourselves into believing that stabilizing money growth would stabilize output. We should go back to the old way of doing things which involved more discretion, more direction toward interest rate targets in the short run.

Representative REUSS. So on the first and narrower proposition, you and Mr. Roberts are in agreement; namely, that the 2½- to 5½-percent range does not make sense under any view and should be allowed to die among its worshippers.

Mr. NICHOLS. Right.

"GREAT MONETARIST EXPERIMENT" A FAILURE

Representative REUSS. On the broader proposition, you and Mr. Roberts have a gentlemanly disagreement. He believes we, the Congress, should stick to Humphrey-Hawkins—which is couched in terms of monetary aggregates—and you say forget it. It hasn't worked and we should go back to a more eclectic monetary policy.

Mr. NICHOLS. I think we should label the past 8 years the great monetarist experiment, declare it a failure and go back to the previous way of doing business.

Representative REUSS. The testimony of all three is enormously helpful and very clear.

INSTABILITY IN DEMAND FOR MONEY

All right, Mr. Renshaw. Mr. Roberts and Mr. Nichols agree that the 2½- to 5½-percent M_1 range is an albatross which ought speedily to be sent flying. They disagree on whether monetarism and the use of monetary aggregates should now be abandoned. How do you feel about the broader and the narrower point?

Mr. RENSHAW. I feel that Congress should withdraw its endorsement of monetary targets. There is just too much instability in the demand for money. Why M_1 has grown so rapidly, I think, is something of a mystery. One suspects it is probably related to a continued rapid growth of NOW accounts. But the question is why are NOW accounts being built up?

One reason that they grew so rapidly in the early months of their introduction was, one suspects, that people were reducing their savings accounts; and those people who didn't have enough money to get over the threshold for money market funds or didn't know enough about them, were putting their money into NOW accounts, withdrawing them from savings accounts. There is a certain convenience to that.

Of course, savings accounts trended downward until the latter part of last year. Now they have been trending upward. It is not clear that M_1 is growing at the expense of M_2 and a relative reduction in savings accounts.

NOW ACCOUNTS AN ALIBI FOR FEDERAL RESERVE

Representative REUSS. Don't you suspect that all of this NOW account talk by the Fed and its staff is simply a search for an alibi as to why things haven't worked? Of course NOW accounts have grown. So has the incidence of German measles in Alabama. But it really doesn't have any relevance to whether the Federal Reserve is giving the country sensible monetary targets. It obviously isn't, because the biggest nonobserver of them is the Federal Reserve.

Mr. RENSHAW. I think the real issue here is whether the buildup and rapid growth of M_1 is the result of a transitory factor or a structural change that will persist.

The Fed, is seems to me, may very well be hoping that part of the buildup of NOW accounts and the rapid growth of M_2 is related to the recent economic recession. In fact, a lot of people are worrying as to whether their jobs are going to continue and are not very sophisticated in money management, and they are socking the money into NOW accounts which pay interest which will be available to them on short-term notice for consumption purposes.

If that is correct, and if the economy does turn up very shortly, as the leading indicators suggest might be the case, there is a lot of resiliency. There is the possibility that you will have a slowdown in the growth of M_1 comparable to the slowdown experienced early last year. That might bail the Fed out of this dilemma without them to have to repudiate their old growth target.

NARROW, FEDERAL TARGETS DO NOT MAKE SENSE

The point is, I think, in a world where you have so much uncertainty as to how the monetary aggregates are going to behave, it doesn't make sense to formulate fixed targets. Certainly Congress should withdraw their endorsement and allow the Fed to have discretion as to whether or not they continue to target or not. Certainly they are ignoring them now, and I think everybody should be grateful that they have been doing that. They have something of a rationalization in that the other targets which most people don't focus on, M_1 and M_2 haven't been growing as rapidly.

Representative REUSS. Did you mean M_2 and M_3?

Mr. RENSHAW. M_2 and M_3. M_2 accelerated four-tenths of a percentage point. M_3 is actually declining and is growing less rapidly.

If you are going to continue to endorse targeting, I think you should broaden the range of targets. The emphasis to this point has been looking at broader aggregates.

CURRENCY SUPERIOR TO CURRENT FEDERAL RESERVE AGGREGATES

If I were to choose an aggregate which I thought would have stability, I would go back to a narrower definition, notably currency. It's been distorted by various things, but I think that financial innovations and the growth of the underground economy have been sufficiently gradual so that one could establish a much stronger and predictable relationship between at least nominal GNP and currency than would be the case with any of the other Fed aggregates. This would be a more sensible type of monetary target at the present time than M_1, which has grown so erratically of late, and even the broader targets which are going to do a miserable job of predicting nominal GNP this year.

Representative REUSS. To make sure that I have you right on both points, you agree with Mr. Roberts and Mr. Nichols that whether one is a monetarist or not, the Fed's current M_1 2½- to 5½-percent growth range is something that should be modified immediately. Their inability to get within that range is a disturbance, even if monetarism is a good thing.

Mr. RENSHAW. I think they are hoping that the growth rate is going to slow a lot and bail them out.

Representative REUSS. Well, but do you think——

Mr. RENSHAW. If it continues to grow as rapidly as it has in the past and other monetary aggregates don't take off and accelerate.

Representative REUSS. To cease spooking the markets by attempting to live within a monetary target range for M_1 that so far patently doesn't work.

Mr. RENSHAW. I would like to see them take it off altogether and not have to target M_1 in particular or any of the other aggregates.

INTEREST RATES ARE TOO HIGH

I think there are innovations which may make it impossible to control the aggregates, which includes money market funds. Even if you do control them, there is such an unstable relationship between them and the growth of the variables that we really want to control, that it wouldn't do you much good. We are going to have to look beyond the monetary aggregates and, I think, focus our attention on something more intrinsically interesting and important. There the emphasis should be on real rates, and I think there is substantial agreement in that regard that the real rates are essentially too high and must be brought down in line with inflation.

Representative REUSS. Mr. Roberts, do you have something to add?

CONGRESS IGNORES FULL IMPACT OF HUMPHREY-HAWKINS

Mr. ROBERTS. I have a copy of Humphrey-Hawkins right here. I think part of the problem and a problem I experienced for many years with Members of the Senate Banking Committee is that sometimes the Congress ignores the full impact of what Humphrey-Hawkins says. It says monetary and credit aggregates. The Fed always comes up and gives bank credit as the credit aggregates that they are looking at. That is such a small part of total credit in the economy it almost makes no sense to look at bank credit. Perhaps the Congress ought to be saying to the Fed: When you give us a credit aggregate, give us something that's meaningful like private credit demand in the economy. No. 1. No. 2——

Representative REUSS. If I can interrupt, I think you are making an excellent suggestion, and I'm going to direct a letter to the Federal Reserve looking toward their July 20 duties and tell them to do what Humphrey-Hawkins has suggested and which they have been ignoring.

Mr. ROBERTS. There is another part of Humphrey-Hawkins which is not treated as fully as it can be, which is the charge to the Fed that in their report they examine the relationship between their monetary and credit objectives and the Congress and the administration's goals for GNP, prices, employment, et cetera. The Fed always refuses to be tied down to what those relationships actually are. Perhaps more emphasis on the relationship between monetary policy, GNP, employment, and prices and less emphasis between monetary policy and what's happening at M_1 would be something that the Congress should push.

BUDGET CYCLE AND MONETARY TARGETS TIMED POORLY

Representative REUSS. Yes, while I agree with you, the Fed's performance is not as clearly contumacious as in the first case relating to credit because they do make some sort of a stab at describing a proper fiscal policy. Usually, however, it is a fiscal policy that is totally unrealistic in the light of what Congress is able to buy, such as, do in the old folks on social security to which Congress then responds with a unanimous rejection a few days later. But there isn't much you can do about that.

Mr. ROBERTS. One thing that is wrong with Humphrey-Hawkins—and it was a problem that we tried to solve but unsuccessfully—is a timing problem. The target ranges are given for calendar years. The Congress debates the budget for the budget cycle, which is October 1 to October 1. At no point in time do the Fed targets ever cover a full budget cycle.

Representative REUSS. Since they are fairly Pickwickian anyway, I don't know how much it matters. But you are right on that.

REVIVAL OF OPERATION TWIST

Let me now turn to another matter. It has been pointed out that both short-term interest rates and long-term interest rates are destructively high. It is also true that one of the main pressures on the short-term borrowing market is because borrowers are afraid to go into the long-term markets because interest rates are so high.

In the early 1960's when short-term interest rates were pretty low and long-term interest rates were thought to be destructively high, Congress finally sold the Federal Reserve on what was called Operation Twist. Namely, in your portfolio and your open market policies, we suggested to the Fed, don't buy only short-terms, bills only, but buy some long-terms because this will bring down the long-term interest rate and produce more investment and more housing which we consider good things.

In the event, the Fed did adopt this view of Congress, and while it was not maintained for very long, it was maintained for a couple of years. And I think the consensus on it was that it worked. It brought down long-term interest rates somewhat more than they would have brought themselves down.

My question is, wouldn't a revival of Operation Twist and a use of open market policy to purchase longer term securities—both government and quasi-government, and if need be, private—be a helpful thing, Mr. Nichols?

Mr. **Nichols**. I think it would. I stated in my testimony, prepared statement, that there has been a blending of the long- and short-term markets, the implications of which are hard for me to understand and, I think, anyone else.

ABANDONMENT OF LONG-TERM MARKET

We see a lot of long-term saving by retirees going into 6-month instruments or 30-month instruments, and we see a switch in corporate balance sheets from borrowing long to borrowing short. Lots of objectives for financial corporations that used to be accomplished in the long-term market are now accomplished in the short-term market. Possibly this is because of the fear of rates coming down in the future: The corporate treasurer doesn't want to be stuck with a long-term commitment at a high interest rate. It is possible there is just uncertainty about what is going to happen to rates.

I wouldn't be surprised within the same corporation where the treasurer is afraid to borrow long, we find management of the pension fund afraid to buy long because he's afraid rates are going to go the other way and he doesn't want to get whipsawed. So, we have a move away from the long-term market on both sides. The Federal Reserve moving back in there to support long-term security prices, bringing down long-term rates, I think, would be a good move at the present time.

Representative **Reuss**. Mr. Renshaw.

HOW FED CAN AID THRIFT INSTITUTIONS

Mr. **Renshaw**. I would certainly support that idea.

One point that I didn't develop in my presentation this morning but which is included in the little paper titled, "Monetary Policy and the Federal Reserve" was the suggestion that the Fed be given an important role in trying to revitalize the thrift institutions and possibly some large corporations which have been adversely impacted by tight money. I don't think that the Fed should confine its purchases of securities just to Government securities necessarily. It is probably in their own best long-run interest to strengthen the thrift institutions. Otherwise that's going to hamper their monetary policy in the future. What is needed in the case of the thrift institutions and other corporations that are suffering so severely from tight money is not temporary short-run loans, but longer-run credit.

Oftentimes in the case of corporate reorganizations, they issue what is termed income bonds of a fairly long or indefinite duration. Income bonds are like preferred bonds in that you only pay the interest if it is earned.

It seems to me that in the case of the thrifts, the average kind of thrift which is on the verge of perhaps being able to recover but might not be if interest rates don't come down pretty rapidly, the Fed could accept income bonds from them now, sell off a portion of its government portfolio, if necessary, or give them these short-term securities which could then be liquidated. The understanding would be that the Fed would hold this bond until there had been an economic recovery and then they would sell them in the open market. The thrift institutions wouldn't have to worry about the problem of amortizing them in the future. They would become a part of their permanent capital structure.

I would strongly support moves in this direction. It is very clear that the Fed can control short-term interest rates within limits if they are not too out of line with the current inflation rate. The long-term rate picture may not be something that they can influence so directly by buying and selling Government securities unless they operate in a long-term market because there, you do have much more of an expectational situation involved.

BAILOUT FROM FEDERAL RESERVE IS LEAST COSTLY

Representative **REUSS**. On the broader point you make of bailing out the thrifts by a Federal Reserve purchase of an income bond by the thrifts, that is, something which says you don't have to pay any interest until you start making money, to the extent that the Fed dumps interest paying Treasuries and buys noninterest paying thrift bailout bonds, the Treasury at the year's end gets that much less money from the Fed, it being the recipient of last resort of the Fed's profits.

How much would that cost?

Mr. **RENSHAW**. I haven't made calculations. Of course, it is going to depend on how many bonds that they supply, and it would be related to the interest they forego on the Treasury securities that they wouldn't be holding otherwise.

I think the big difference between this and other bailout measures is not that it is going to be costless to the Federal Government. Either way, the Treasury is going to lose. The big hope by having the Fed get involved in this is that once the thrifts do recover and the Fed is in the position to sell these bonds, then it can reap a capital gain. It may well be able to sell these bonds not at a discount which you would have to do now, but more nearly their par value, and get a capital gain that would enable the Government to recover much of the lost interest and help to balance future budgets. There is some speculative advantage to having the Fed involved in trying to solve the problem on a long-term basis rather than having some other agency provide essentially the same kind of subsidy on a much shorter term basis.

EXPECTATIONS ARE IMPORTANT

Representative REUSS. Perhaps I hadn't understood you would have the thrifts sell these noninterest-paying-until-you-start-making-money bonds to the Treasury at a discount? If so, it would be a very steep discount, I would think.

Mr. RENSHAW. Well, hopefully, this period of horrendously tight money, which is unprecedented in history, essentially, won't endure forever. So, if you issue income bonds with an interest rate, if payable, comparable to existing interest rates and interest rates do come down, then, of course—and people are convinced that the war on inflation has been won to some extent—there is, to some extent, hope that these bonds could be sold more nearly at par. There would be less of a loss there and you would only forgo a certain amount of interest. If you did sell them at a discount, there would be a real gain.

It is a political matter, I guess, what kind of interest you demand when thrifts are in a position to pay interest on their debt. But I should think it would be at rates that are more nearly comparable to existing rates on long-term securities. And if interest rates do come down, there is a possibility of a real capital gain being achieved by virtue of the interest rate effect; provided, of course, that we are successful in solving expectational problems that inflation won't revive and the fear that long-term bonds simply aren't a good investment under any circumstances.

Representative REUSS. Thank you.

FED NEEDS HELP FROM FISCAL POLICY

Mr. Roberts, my question: Would the Fed be well advised to adopt a born-again Operation Twist in which it lengthens its portfolio, whether of Treasuries or near Treasuries or private sector fixed income securities, in order to attempt to modify some of the term structure interest rates and getting borrowers off their intense short-term concentration and into a more agreeably priced long-term?

Mr. ROBERTS. I think the situation we have is very, very serious. We are in danger of seeing the long-term markets dry up completely. People have turned away from the long-term markets for so long now that it really raises questions of how we are going to revitalize the long-term markets at all. If we have a situation where everything is short term and everything exogenous shock whips interest rates up and down, we will have no stability in this economy. I think to have the Fed perform an Operation Twist is a drop in the bucket. I think a more serious consideration of the long-term markets, whether they are going to survive, and how to revive them really needs to be looked at. The only thing that I see that can do that is a sustained and winning fight against inflation for a long, long period of time. We have started on that road. Hopefully, we will have the resolve to stay on that. But again, the Fed can't do that alone. It needs help from fiscal policy and we need other structural changes. But I do have great concerns about the long-term market.

Representative REUSS. Mr. Roberts, Mr. Renshaw, Mr. Nichols, thank you very much for a tremendous contribution to our hearings. We are most grateful to you.

We now stand in recess until our next hearing on monetary policy.

[Whereupon, at 12:30 p.m., the committee recessed, to reconvene at 10 a.m., Tuesday, June 8, 1982.]

THE FUTURE OF MONETARY POLICY

TUESDAY, JUNE 8, 1982

Congress of the United States,
Joint Economic Committee,
Washington, D.C.

The committee met, pursuant to recess, at 10 a.m., in room 2359, Rayburn House Office Building, Hon. Henry S. Reuss (chairman of the committee) presiding.

Present: Representatives Reuss and Richmond.

Also present: James K. Galbraith, executive director; and William R. Buechner and Chris Frenze, professional staff members.

Opening Statement of Representative Reuss, Chairman

Representative Reuss. Good morning. The Joint Economic Committee will be in order for its continued hearings on the future of monetary policy.

We meet amid evidence that the administration's game plan for the economy isn't working. Yesterday's headline, "Economy Slumped in May," tells at least part of the story. Falling production, falling new orders, and falling employment now threaten to derail even the anemic recovery hoped for in the second half of this year.

The monetary policy of the administration and the Federal Reserve bears a major responsibility of the bleak condition of enterprise in our country.

Our witnesses have so far unanimously agreed that the Federal Reserve's ceiling of 5.5 percent for money growth in 1982, coming on top of the disastrously tight monetary conditions of 1981, is too low and must be reevaluated and revised.

But after that target ceiling has been reevaluated and revised, what are the basic and continuing issues of monetary policy?

Let me name three of them that appear in the testimony of the witnesses this morning.

First, what is the future of monetarism and of monetary targets? How can the targeting process be made accountable to the economic policy objectives of the Congress? Should we return to interest rate targeting? Should targets be stated in terms of nominal GNP, inflation, and unemployment in addition to targets for monetary growth? Should the decisionmaking structure for monetary policy be altered to make the Fed more accountable to the administration or to the Congress? Should the recent innovation of including an instruction to the Federal Reserve on monetary policy in the budget resolution be institutionalized and, if so, how can this be done?

Second, should we now pay less attention to money and more to the formation of debt? Since the Humphrey-Hawkins Act became law, the Fed has set targets for total expansion of bank credit in the economy each year. But bank credit is by itself at best a very partial indicator of total credit expansion, and the Federal Reserve has paid little attention to total credit expansion in its targeting exercise. What about commercial paper, trade credit, long-term bonds, mortgages other than by financial institutions? Should we now move to a target for total credit expansion and, if so, how can this target be achieved?

Third, there are indications that the structure of debt is becoming very important. Companies and nations are piling up unheard of amounts of short-term debt at high interest rates that they can neither repay nor convert into long-term obligations. As these debts compound, the danger of a financial calamity appears less and less improbable to serious observers of the corporate and international scene. What can monetary policy do? Should the Federal Reserve make a market in long-term securities by buying Government bonds from the public as well as the long-term securities of State and local governments and even of sound private companies, or do we need even more drastic steps?

Our witnesses today, as I've said, will cast some light on each one of these three pressing areas. Our witnesses are Albert T. Sommers, chief economist of the Conference Board; John H. Hotson, professor of economics at the University of Waterloo, Ontario; and Harvey D. Wilmeth, vice president and economist of the Northwestern Mutual Life Insurance Co., Milwaukee, Wis.

Let me say that Mr. Sommers is an old and valued friend of this committee; that Mr. Hotson is a professor in our neighbor and friend to the north, Canada, whose work is well known to us; and Mr. Wilmeth is particularly welcome here because he is a member of one of my States and city's leading financial institutions, the Northwestern Mutual Life Insurance Co., and I've had the pleasure of his friendship for many years.

So you're all most welcome and we'll ask for starters Mr. Sommers to proceed. May I say first that each of you has produced a memorable prepared statement which will be received in full into the record. I'm going to ask you to proceed for around 10 minutes each, or whatever is congenial to you, to summarize your statement. We won't hold you exactly to that but you may want to go beyond what is in your prepared statement. Mr. Sommers, would you start out.

STATEMENT OF ALBERT T. SOMMERS, SENIOR VICE PRESIDENT AND CHIEF ECONOMIST, THE CONFERENCE BOARD, NEW YORK, N.Y.

Mr. SOMMERS. Thank you, Mr. Chairman. It's probably appropriate for me to go first because, as you judged from my prepared statement, my interest today is the structural background of the inflation problem and the logic of the application of monetary policy to that problem.

I'll summarize those views very briefly and then add a few notes about what might be done about these issues.

CAUSES OF INFLATION

First of all, none of us would deny that monetary and fiscal policy are closely connected to the subject of inflation, but they are connected as the proximate or the efficient cause, not the ultimate nor the final cause.

The final cause of the inflation in the United States and, for that matter, throughout the democratic West that has experienced our own postwar evolution, are political, social, technological, and ethical. They are the forces that shape the mixed economy that we are all living in, and a mixed economy is a radical departure from the pure model of theoretical economics on which much of monetarism rests.

The fact is that not all prices are any longer movable. Not all markets clear the way the theoretical model of a corn market will clear. The system—not just its monetary parts but its real parts as well—is full of floats, indexations, long-term contract supports, subsidies. It features a large government sector whose demand is independent, whose borrowing is not interest-rate sensitive and whose costs and expenditures are partly inverse to revenues.

Our fiscal and monetary behavior is in a causality chain with inflation but it is not truly independent—and there are preceding links in the chain—and it's a mistake to think of monetary policy as a simple lever that can be used across a narrow front to get a grip on inflation

NONACCELERATING UNEMPLOYMENT RATE OF INFLATION

Some of the pecularities of a modern economy are reflected in the technical economists' version of an NAIRU—that is, a nonaccelerating inflation rate of unemployment—or to put it otherwise, an unemployment rate that is sufficiently high to foreclose the likelihood of accelerating inflation.

The NAIRU and its accepted measurements has been rising considerably over the postwar years. I would suggest that there is also a kind of mirror image of the NAIRU in an NAURI; that is, a nonaccelerating unemployment rate of inflation, which means simply that there are inflation rates which, if we fall below them, will produce rising unemployment or, to reverse the causality because it works both ways, there are unemployment rates that will drag the inflation rate down.

The effect of doing that—that is, of deliberate shrinkage of the inflation rate—is to break the mechanism by which mixed economies finally reconcile all of the superficially irreconcilable demands on total output.

There is also, I believe, a natural rate of budget deficit, a view that I think is increasingly widely held now, and there is a natural rate of growth in total credit which I think others of our panel this morning will comment on. Deficits, money growth, and inflation are worldwide experiences. They are compatible consequences of the mixed economy's effort to blend a free market which is its heritage with a great deal of public purpose and the cost of public purpose.

MONETARY POLICY AND INFLATION

An NAIRU application of monetary policy breaks that chain. It treats inflation as a unique, separable phenomena in an evolutionary history. It threatens to drive the inflation rate below a sustainable level for the complexities of a mixed economy, and it therefore attacks the real world of profits, investment, jobs, real incomes. It bends down the growth path far into the future and toughens the future social problems that this and all other mixed economies are bound to confront in the future. It inaugurates a feedback process that we're in the middle of now that is dangerous, unpredictable, and was not foreseen when these policies were installed a year and a half ago, in which interest rates rise very sharply. They contract the system, contract Federal revenues, increase the debt service cost in the Federal budget and therefore elevate the Federal budget deficit, which in turn feeds back into high interest rates.

If we were to agree that money and budgets are proximate causes of inflation, they can nevertheless become independent causes if they pursue an independent excess course. I don't really find that in the U.S. economic history. It's very hard for me to argue that monetary policy in the United States has been excessively liberal over the past 15 years. There is some evidence that its characteristic posture has been too tight rather than too liberal, and I'm even inclined to say the same thing about the Federal budget.

BUDGET POLICY

Until very recently when the budget outcome was trapped by a combination of tax reduction and defense requirements, the U.S. budget deficit—and the accumulating public debt that is a kind of summary continuing image of it—has behaved on the whole rather conservatively among mixed economies. Our relationship of public debt to GNP has been subsiding almost continuously since the end of World War II, unlike, for example, that same relationship for West Germany and for Japan, which has been rising. Their relationships are lower than ours only because the new governments we installed in those two former enemies of World War II simply repudiated their public debt. They started from zero; we started from 100 percent. But it's very hard, as a practical matter, to describe either our monetary policy or our budgetary policy as extreme in light of the experience of other countries with which comparison is useful.

CAUSES OF HIGH-INTEREST RATES

In addition to the fact that this budget position today is a major cause of the interest rates that we're experiencing—and I accept that conclusion—it's not so much the present deficit as it is the visible trend of the deficit and the anticipations to which it gives rise. I think it's also worth noting that there are other causes of these rates of interest that are unlikely to go away under present practice.

One of them is rate volatility. That's an inevitable consequence of allowing rates to fluctuate under conditions in which we control money growth. The financial community, which is the quickest to respond to Federal action, is now so indoctrinated with monetarism that it really deprives the Federal Reserve of a great deal of its ordinary pragmatic freedom. It is not the growth of M_1 and M_2 that causes higher interest rates in the U.S. markets. It's the anticipations of participants in the markets who interpret growth in the money aggregates as forecasting—and they have been accurate—Federal Reserve restraint. It's the expectation of restraint, not the growth in the money, that is responsible for that trapped feeling the Federal Reserve must have. No matter what it does with the money stock, the rates are more likely to go up than to go down.

NEED MORE ANTI-INFLATION TOOLS

Finally, we've lived through a revolution in the U.S. money market. The deregulation, the spread of floating rates, the proliferation of instruments, the immense growth of the Eurodollar market—all have proceeded at explosive rates. But the Federal Reserve has altered its technical practices and the tools it is willing to use almost not at all in the course of that explosion.

My conclusion is that the single-minded assault on inflation on the part of monetary policy is ill advised and extremely expensive. There are alternative approaches that are much broader and that take account of the realities of the economy with which we are now confronted.

I think the Federal Reserve should widen the tools it finds acceptable. I think you will get other suggestions from other panel members on that subject, and I'll reserve it for discussion.

I think the budget deficit has to be restored to a sustainable cyclical deficit. It really isn't very far from that now, but the progress of the deficit out in the future departs obviously from a cyclical deficit and incorporates a large and growing secular deficit.

I think our tax structure compounds our inflation problem. I think—and there's a great deal of agreement among other economists on this—that the tax structure should be shifted toward a consumption base rather than an income and saving base.

I think we need both an industrial policy to accelerate the efficiency of our capital stock and an educational policy to accelerate the efficiency of our labor force; there is no way of getting at U.S. inflation without improving the quality of the resources available. I don't agree with Professor Laffer on everything by any means, but growth and output achieved by improved productivity is fundamentally anti-inflationary.

A SOCIAL COMPACT AND INCOMES POLICY

Finally, if all of these changes—none of them really terribly radical—were to be put in the context of a compact, a series of measures designed to constrain inflation and elevate real growth in living standards, within such a package it might not be fanciful to attempt to include a wage guideline. That's a highly divisive suggestion, I know. I would not recommend it alone, but in the context of a broad reappraisal of our equipment suitable for growth and constraint of inflation. In a mixed economy we don't want to give up, I think a wage guideline deserves to be on such a list of proposals.

Thank you very much, Mr. Chairman.

[The prepared statement of Mr. Sommers, together with "The Sommers Letter" article, follows:]

PREPARED STATEMENT OF ALBERT T. SOMMERS

I am grateful for this opportunity to offer views on the current position of monetary policy, and its consequences. It is nearly impossible to discuss monetary policy sensibly without reference to fiscal policy, and I will accordingly offer some comment on that subject as well. The views expressed here are entirely my own, and not those of The Conference Board, which does not take positions in matters of this kind.

Since late 1979, the Federal Reserve has conducted its policies generally in accordance with the principles of monetarism --- not totally in accordance, in that it has produced, or at least tolerated, enough volatility in the growth rate of money to displease monetarists outside the Federal Reserve, and even to lead them to argue that the principles of monetarism are not really being tested. But it is surely correct to say that the Federal Reserve has paid more attention to money stock, and much less to interest rates, than it did prior to its 1979 "accord" with itself. Certainly, if we assume (with some risk of being very wrong) that interest-rate outcomes under all conditions are substantially shaped by Federal Reserve behavior, the present level of interest rates in the middle of serious recession, and the enormous fluctuation of rates over the past two and one half years, would suggest that the Federal Reserve's attention has been otherwise engaged. And it is not just the Federal Reserve whose attention has been absorbed by considerations of money stock: the standard response of financial markets to the Federal Reserve's weekly announcements on money growth indicate that all the important participants in the markets accept the Federal Reserve's stated monetarist intention, and react accordingly.

The central principle of monetarism is that inflation is a monetary phenomenon, arising out of excessive creation of credit relative to the oncoming supply of goods and services. To restrain inflation, it is therefore necessary to restrain the rate of credit formation, to allow for growth but not for inflation. The restraint should be continuous and non-cyclical; it should forego pragmatic responses to the business cycle. And it should employ only aggregate control over the "supply of credit," leaving the allocation to a supposedly free and pure market. A first appraisal of current Federal Reserve policy must take account of whether its diagnosis of the cause of inflation is correct and complete; and then whether the tools the Federal Reserve allows itself can cure the problem, or simply deflect it on to other operating characteristics of the system.

My own opinion is that the causes of inflation in the United States (and throughout much of the West) have for a decade been incompletely analyzed, and incompletely described; and, as a consequence, we have been led first to seek, and then to grimly tolerate, treatments of inflation that threaten to suppress long-term economic performance, and thereby to damage a consensus on which postwar economic prosperity and social peace have rested. Inflation is, in the first instance, a subject within economics, and the world has patiently left its analysis, and the recommendations for its control, to economists. Naturally enough, they have come up with an economic diagnosis, and an economic cure. If the world were in a stationary free-market condition, the monetarist explanation would be sufficient, at least in theory, and its prescriptions might "solve" the "problem." But economic and social history is an evolutionary process, and evolutionary processes do not present individual "problems," detached from their context and amenable to isolated treatment. From an historical, social, institutional point of view, the monetarist approach to inflation is far too narrow to grasp or treat what are almost certainly the predominant ultimate causes of inflation throughout the West, and those causes cause many things other than inflation itself.

The reasons why governments have created "too much" money, and run "too big" deficits are the ultimate reasons for inflation --- the "final" causes, as distinguished from the "efficient" or "proximate" causes. Money creation and budget deficits are the visible, measurable economic causes of inflation; they leave a statistical trail, leading forward to inflation, that has been surveyed to almost everyone's satisfaction, and its study has doubtless produced some useful guides to monetary and fiscal policy. But the trail leading backward to the final causes of inflation has gotten much less attention than it deserves. The causes of the money creation, and the causes of the deficits, are political, scientific, ethical, rather than economic. They involve democratic institutions, the acceleration of technology, and a humanistic conception of what holds a society together. The interconnections between the inflation rate, on the one hand, and our social and technological history, on the other hand, do not lend themselves to the quantitative method of economics; but they are obvious enough. The ultimate causes of inflation are also the causes of substantial departures, in our economic system, from the steady-state, free-market assumptions that underlie economics generally, and monetarism in particular. This leaves plenty of room for useful contributions on the part of economics; but those willing to accept an historical and evolutionary view of where this system is now are entitled to have their doubts about narrowly based anti-inflationary policies, and what their consequences are likely to be.

Most of the unease about doctrinal monetarism that prevails within the economics profession does not reflect disagreement with the technical monetarist propositions, as much as it reflects subconscious awareness of how far the institutional structures of modern economies have departed, in the course of their historical evolution, from the pure, private markets on which monetarism rests its propositions.

For myself, I think monetary policy can and should avoid being an independent source of inflation; that is, there are rates of credit creation that would clearly represent a monetary inducement to inflation. But I do not think that monetary policy can stop an inflation whose causes are upstream from money itself; and the effort to do so can be immensely costly. No monetary policy can reach upstream to alter the institutions responsible for inflation; the effort simply diverts the upstream causes of inflation on to the real world of employment and output. The record makes it pretty clear, at this juncture, that it is the recession consequences of restrictive monetary policy that constrain inflation; the declines in inflation in the presence of tough monetary policy have been uniquely associated with falling output and rising unemployment. The association is so clear as to suggest that there is a kind of natural inflation rate in modern societies --- a counterpart to the "natural unemployment rate" which economists, including monetarists, have deduced from the historical record. If there is a NAIRU (a non-accelerating-inflation rate of unemployment), there also appears to be a NAURI, a non-accelerating-unemployment rate of inflation. It is not a very popular thought that a certain amount of inflation is required for a developed mixed economy to maintain satisfactory levels of output, employment and growth, but that begins to be a responsible conclusion. When the effects of recession on output and employment are relieved, the inflation inherent in the frictions within all mixed economies seems regularly to reappear. Even very prolonged recession (monetarists fatalistically accept the necessity of many years of recession to "cure" inflation for all time) is less likely to achieve that effect than it is to produce a whole new round of social and political initiatives to modify the hardship of recession and to restore growth. The beginnings of this process are already apparent in the United States, and in Europe, whose deep and prolonged stagnation is partly attributable to inappropriately high interest rates.

To the non-monetarist eye, doctrinal monetarism exacts a heavy price for a contingent (and I think improbable) reward. It seems to me that a great deal of this, perhaps all of it, is recognized at the Federal Reserve itself. Their own regularly published chartbook discloses the recurrent recessions associated with peaks in interest rates, and the revival of inflation after even a modest return to higher operating rates and reduced unemployment rates. And, of course, the largest budget deficits of all, and the fastest growth of government spending, appear during and immediately following the recessions precipitated by monetary policy. Monetarists argue that the cyclical revival of inflation could have been prevented by less rapid growth of credit early in the business-cycle expansions; but our present experience suggests that restrictive credit availability (particularly in the presence of the falling inflation rates associated with recession) forestalls cyclical expansion itself, as well as the revival of inflation.

But the Federal Reserve itself is trapped by the wide (and strangely enthusiastic) acceptance of its principles in the financial community, and the slightly paradoxical conditioned responses to which they lead. The Federal Reserve's commitments to a target rate of growth imply prompt restrictive action, whenever the supply of money rises more than is compatible with the target; it is the anticipated reaction of the Federal Reserve, not the rise of the supply, that elevates the rates. Given the present structure of anticipations, a genuine increase in the availability of credit will not produce lower rates, unless the Federal Reserve explicitly renounces its dedication to its targets. I imagine the Committee will receive much comment from others on the quality and dependability of the money-stock concepts that are embodied in the targets; but if, as I think, the concepts rest on very dubious distinctions of what are "transactions balances," in a market where credit instruments have proliferated spectacularly over time, then the targets themselves are not uniquely related to aggregate credit conditions, and dedication to the targets can have quite capricious consequences for the system as a whole.

As recession continues here and abroad --- and as budgetary conditions continue to deteriorate under the impact of recession, rising debt service, and new spending proposals to treat the most serious human and industrial consequences of recession--- I would hope that a new and broader view of inflation and its related issues will appear. It is not impossible to envision a broad treatment of inflation that would give proper recognition to the general economic objectives of modern economies. Such a program would incorporate pragmatic monetary policy directed toward the maintenance of growth in jobs and output, allowing for some persistent, non-cumulative inflation. It would incorporate wider techniques of credit management, intended to favor the availability of credit for investment, while discouraging its availability for consumption, speculation and takeovers. It would incorporate a revision of tax policy, to increase the tax burden on consumption, and free the burden on income and saving. It would not seek a literally balanced federal budget (that is, it would allow the federal government access to capital markets, to finance some of the investment requirements confronted by all modern governments); but it would certainly seek to reduce the projected federal deficits to a target level of perhaps 2 percent of GNP, through both spending curtailments and tax increases. In other words, it would seek a social compact yielding orderly change in some of our institutions, to restrain inflation without condemning us all to prolonged stagnation. In the presence of such a social compact, it might even be possible to achieve a reasonably workable compact on a wage guideline, as recession gradually gives way to vigorous growth of output, and reductions in unemployment. Nobody would say that achieving such a program will be easy; but then few of us are enjoying the prolonged stagnation and unemployment that result from double-digit real interest rates imposed by monetarist policies.

the sommers letter

A continuing, concise view of the financial, industrial, and policy outlook

May 26, 1982
82 - 14

Interest Rates And A Budget Compromise

- This Letter has accepted the conventional view that interest rates are where they are because of the overhanging threat of immense budget deficits.
- If the capital markets were to receive dependable news of a reasonably satisfactory compromise on the budget, would the rates go down? Of course, but ....
- Suppose they didn't. Where would we all look for explanations? The candidate areas; rate deregulation, a monetarist Federal Reserve, the wave of innovation in financial markets, floating rates, the national saving rate, expectation of some recovery in the inflation rate, the internationalization of money markets, floating exchange rates.
- There is a little conviction in this hypothetical exercise. The bond market is a buy; but the probable decline in rates, assuming some budget settlement, will not take them back down to the familiar territory of ten years ago.

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For almost a year, these Letters have been carrying on obsessively about interest rates --- their connection to the outlook, and where they themselves are headed. The Letters have accepted, generally speaking, the prevailing conventional view that the rates are a function of the demand for funds; that the prospective demand for funds has been gravely augmented by the requirements of the Treasury; that if there are to be credible indications of a decline in Treasury demand, the rates will fall; and when they fall, they will fall substantially, because inflation itself, and inflation expectations, have also subsided. Nothing more than this bald sketch is necessary for the purpose here; past Letters have spent enough time on these relationships, by and large.

"By and large?" the reader inquires uneasily, "Is he trying to tell us something, in his obscure way? Is he backing off? Is there more to the story? Maybe things he doesn't understand all that well?"

Well, yes. There are a few uncertainties about interest rates not well revealed --- let's face it, not revealed at all --- in the description of the interest-rate future carried by these Letters.

Let us suppose that the public-spirited intellectuals we have sent to Washington deliver to us a very acceptable resolution of the so-called budget crisis. Never mind the details; it is made up of considerable tax increases and considerable spending reductions --- big enough on both sides to support a credible probability of a continuously declining trend in the deficit, and hence in Treasury financing requirements.

And then suppose, just suppose, that the interest rates do not go down, or go down only a little, or go down a lot and go most of the way back up. Would there be explanations for this behavior, and would they carry any conviction?

This is heuristic reasoning --- the search to see what follows from an unproven assumption. In somewhat different form, it has been a source of progress in the physical sciences. Its exploration here can only be a modest effort, because economic logic is not very dependable, and because we are exploring a future condition. It nevertheless does some revealing things.

The outcome described above would immediately invite a search through the financial market itself, for conditions that differ sufficiently from the past to vacate reasoning drawn from the past. And there are such conditions, in impressive abundance.

We are, for example, far down the road of rate deregulation. The passbook savings funds (at a cost of about 5 percent) and the gross retention of cash values by life insurance companies (at an opportunity cost to the policyholder of prevailing rates less 5 percent --- the customary policy loan rate) are nearly things of the past. They were a major source of credit for the construction industry, and other forms of private investment. This pool of low-cost money may have reached a peak a decade ago; it has been subsiding ever since, and its dwindling is associated with a higher cost of money to lenders.

A second consideration. In October 1979, the Federal Reserve reached a new accord with itself, under which it shifted its own attention largely from interest-rate behavior to money-stock behavior. The accord rested on the conviction that inflation was public enemy number one; that inflation was a reflection of excessive creation of money in the effort to maintain interest rates at relatively low levels; and that it was the primary responsibility of the Federal Reserve to contain the inflation, not the interest rates. The inflation has come down very agreeably in the past year. It is not clear what the direct and indirect relationships of monetary policy to the decline in inflation have really been, but at least one effect of the new policy on interest rates seems to be clear enough; they have been vastly more volatile than ever before in our history. The bond market has become more volatile, and perhaps more speculative, than the stock market itself. Volatility implies uncertainty, and uncertainty implies a premium in the return for investing.

Thirdly, and partly as a consequence of the foregoing, the financial markets have undergone an evolutionary radiation of forms that is simply unprecedented; it resembles the paleontologists' description of the explosion of life forms in the Cambrian era. (Here, for once, we are no worse off than the physical sciences; nobody pretends to know the reasons for the Cambrian explosion.) The degree of intermediation in financial markets, both in terms of the volume of traffic and the number of avenues, has increased exponentially for a decade, in the presence of a sympathetic regulatory attitude toward free-market innovation. Options markets and futures markets have exploded; speculation is overpowering the useful hedging functions of such markets. Dozens of ways have been found to occupy distinctive points on the risk-reward and short-term-long-term menu of selections open to investors. The financial tables that used to occupy two pages in a serious newspaper read by businessmen now take a dozen pages. And that's only the surface.

A number of consequences are deducible from the explosion, but it is hard to appraise their significance, apart from the obvious fact that it has been a great boon to the computer industry, as well as to Wall Street itself. The proliferation has not necessarily improved marketability; marketability is a function of width of ownership and dispersed trading volume, rather than proliferation of form. (In early times, for example, option traders may have traded the stock itself.) The trading volume has, of course, multiplied; witness 70-million-share days on the New York Exchange (much of it mediated by institutions), and a stunning, almost vertical rise in debits to demand deposits in the major New York banks. (Demand deposit accounts in these banks are now totally depleted and totally replenished more than four times a day. Now, that's turnover!) The domestic financial market, even apart from its international tendrils, must be the closest approach ever to the perfect markets described in general equilibrium theory. But it is also the most intermediated market in history, and each intermediator needs a piece of the action.

Next consideration. For the bulk of short-term business borrowing, rates are no longer fixed; they float. The risk curve confronting a borrower under conditions of floating rates is very different from the risk curve associated with a fixed-rate loan. A high current rate is less of a restraint; since other conditions being equal, the higher the rate the more probable that it will decline. Of course, the reverse is also true; the lower the current rate, the more likely it is to rise. Borrowers naturally seek a fixed rate when the rate is low, and a floating rate when the rate is high; lenders have to be coaxed to cooperate. Most borrowing (and most of everything else in business) takes place in times of high activity and high interest rates, so the composition of business loans has drifted heavily in the direction of floating-rate contracts. Under such conditions, the prevailing rate is less discouraging to borrowers than it would be in a predominantly fixed-rate market; and of course the borrower pays for his preference.

Next consideration, maybe more fundamental. Savings propensities among Western societies differ, of course, but it is probably true to say that the saving function is on the defensive throughout the West. The provision of public "saving" systems appears, according to such distinguished authorities as Martin Feldstein and others, to have eroded the private saving impulse, and the private erosion is not offset by public saving, since the public systems are largely unfunded. The provision of social security may be only a small part of the troubles of the saving function. The time horizons of the generations raised in a mixed economy, with its dedication to softening the rigors of the free market for citizens of all ages, appear to have shrunk toward their _carpe_ _diem_ lower limit. It may be that the collapsing of time horizons, and its association with lower saving, is reversible, and some see signs that it is already reversing. But we better wait a while to be sure. In any event, there is a lot of investing to be done out there; and the supply of saving is uncertain.

Next, I suspect it is being increasingly recognized that the inflation experience of the West has been badly reported, and badly analyzed, for a decade. The _upper_ reaches of the inflation rate in the 1970's were powerfully connected to the immense surge of energy costs --- a sporadic consideration that does not fit anybody's elegant explanation of inflation. But the _lower_ reaches of the inflation figure have been associated with unsatisfactory performance in other very important respects --- namely, unemployment, investment, growth rates, budgetary outcomes. The real causes of inflation in modern societies can in the end be attributed mainly to their admirable achievements --- democracy, humanism, technological advance --- to which doctrinal economics pays scant attention. Given the commitments of modern democracies --- Reaganomics to the contrary notwithstanding --- they seem to require a certain amount of inflation to operate at politically acceptable levels of resource use. The inevitable inflation is the inevitable concomitant of inevitable budget deficits, inevitably financed by monetary policy. If this is a fact of life, and I am more convinced of it than your average economist, then there is a significant degree of inflation in the future --- no necessary return to double-digit, by any means, but well above the rate that is associated with the deeply unsatisfactory economic performance of today. Western economic systems, with their ethically oriented distributive ambitions, are unstable in the absence of high resource use and vigorous growth in output. The record says, perhaps regrettably but nevertheless convincingly, that some degree of inflation will be associated with the compelling mandates confronting Western political systems. Central banks throughout the West (and perhaps particularly in Europe) are confronting this issue in an acute form right now.

Finally, financial markets have been radically internationalized over the past decade, and currencies have been free to float. These developments alone would warrant some caution in treating past interest-rate history as a satisfactory guide to the present and future. Before adjustment for interbank holdings, the volume of dollars on deposit outside the U.S. is in the neighborhood of 1.4 trillion dollars. The cost of credit in Eurocurrency markets is supposed to be less than in the respective domestic markets, because of the absence of regulatory and reserve costs, but the Eurocurrency rates float with the domestic rates, so there's not much reason to think they moderate U.S. rates. On the other hand, this immense pool of money can move quickly into and out of individual currencies in search of yield. Any decline, or any substantial expected decline, in

U.S. rates from their present level might well produce offsetting declines in holdings of dollars. The net effects on U.S. rates of the internationalization of financial markets is hard to call, but the rates prevail in a much bigger market than the U.S. alone, and part of the investment in dollars is free to move out. In any event, a failure of U.S. rates to decline substantially with a budget settlement would surely evoke a hard look at the enormous presence of the Eurodollar market.

Well, these are the results of a first pass at the exercise. If rates do not fall substantially after a reasonable redirection of the U.S. federal budget, it is these conditions to which the economics fraternity and the financial community itself are likely to turn. They carry, at least to me, a certain amount of conviction. They leave clearly open the prospect of a considerable rate decline associated with an improved budgetary prospect; that remains the probable position. But they carry the caution that rates will not, in any predictable time-span, return to the levels --- either nominal, or real --- that would have been considered normal in the 1960's, or even as recently as 1975. The bond market is almost certainly a very good buy today; but it is not as superlative a buy as it would have been if these rates had been reached in the sociological and institutional structure of a decade ago. No settlement of the budget impasse, and no feasible constraint on the growth of money, can bring us back to rates that prevailed in a simpler society, and in a simpler, non-indexed, non-floating, still domestic, and still regulated financial market.

Representative **Reuss**. Thank you, Mr. Sommers. Mr. Wilmeth.

STATEMENT OF HARVEY D. WILMETH, VICE PRESIDENT AND ECONOMIST, NORTHWESTERN MUTUAL LIFE INSURANCE CO., MILWAUKEE, WIS.

Mr. **Wilmeth**. Mr. Chairman, members of the Joint Economic Committee, there is widespread concern today over excessive interest rates, excessive inflation rates, and excessive unemployment rates. We are told that there is no alternative to the traditional monetary cure, but that it won't be too painful if we take our medicine in stable doses.

I have two messages. The first is that the simple monetary cure requires a full scale deflationary depression to do its job. Halfway measures won't work. The second message is that a more complex monetary alternative can achieve the same goals without high unemployment and high bankruptcy rates, but that alternative also has a price.

ECONOMY HURT BY FINANCIAL IMBALANCES

A growing body of evidence indicates that our economic problems result primarily from deep-seated imbalances in the financial structure of the economy. Those imbalances expand and contract within each business cycle, but compound from cycle to cycle because the cyclical corrections are incomplete. Excessive credit expansion creates excessive debt burdens if not offset by inflation, but inflation produces its own set of destructive imbalances. Interest rates rise, become more volatile, and short rates may exceed long rates most of the time. All of this occurs for logical and understandable reasons.

A money and credit system does not manage itself. Either the Government or the invisible hand of market forces will provide the ultimate unavoidable discipline. We have chosen to let market forces provide the bulk of that discipline, but we don't like the consequences. Inflation, stagnation, and depression are all a part of that discipline. This is an extraordinarily inefficient way to manage the financial structure of a modern economy.

We have a choice. We don't have to let inefficient market forces provide most of the discipline of the money and credit system. We can choose to provide the essential discipline through appropriate monetary and fiscal control mechanisms. But there is no free lunch. It does no good to try to evade key parts of the discipline. That is what we have been doing. Our monetary policies have accommodated unsustainable patterns of finance during cyclical expansions, and we have closed our eyes to the consequences. The results are all too evident.

A CRITIQUE OF CURRENT POLICIES

Let me briefly review our present situation. Current monetary policies are on a collision course with any material recovery from the current recession. When the increased rates of credit expansion likely to develop this fall collide with the monetary targets, interest rates must rise by whatever amount is needed to clear the credit markets. Major capital investment projects will continue to decline as real interest rates remain at exceptionally high levels. Double digit unemployment will be likely by yearend under this scenario, along with continued high bankruptcy rates, plus an outlook for more of the same.

The alternate scenario that would result from a shift to monetary ease is equally adverse. If the Fed accommodated increased credit expansion above current excessive levels, accelerated issuance of "near money" by banks and other financial intermediaries could temporarily hold interest rates below their equilibrium levels. Interest rates might even decline for a year or so, but the short-term ease would be paid for by an even greater increase when credit restraint again became necessary. And, of course, inflation rates would resume their rise.

These are the catch-22 alternatives that result from our implicit decision to let market forces discipline the money and credit system. It is time to reconsider that decision. A multidimensional monetary theory offers new explanations of our current money and credit problems. More important, it offers new solutions. Suppose it was decided to provide comprehensive discipline of the money and credit system through appropriate monetary and fiscal policies. What would have to be done differently, and why? And what basis is there for thinking that it would work? Let me focus on the interest rate portion of the overall problem.

RECENT CHANGES IN INTEREST RATE BEHAVIOR

Three separate and distinct adverse changes in interest rates have progressively developed over the last 30 years.

First, short- and long-term interest rates have both rise to historic highs.

Second, short- and long-term interest rates have both become much more volatile.

Third, a normal positive yield curve—short rates lower than long rates—has been replaced by a normal negative yield curve.

The combination of these three changes is creating an economic disaster. Why has this happend?

WHY INTEREST RATES ARE SO HIGH

Interest rates are determined by supply and demand forces in fiancial markets. The net supply of new issues of debt provides the supply side of this relationship. That supply totaled $400 billion in 1981. The basic market for the net supply of new debt is $M_{1\text{-}A}$, the noninterest-bearing money supply. $M_{1\text{-}A}$ averaged $364 billion in 1981. The pressure of supply on demand is measured by the ratio of the increase in debt to the money supply. In 1981, there was $1.10 of new debt per dollar of money supply. I call that ratio the monetary policy index. It represents the financial-investment velocity of narrow money. It is far too high. In 1952 when long-term interest rates averaged 3 percent, the ratio was $0.25 of credit expansion per $1 of money.

The higher the monetary policy index, the higher the interest rates needed to clear the new issues markets. Nominal interest rates determine the opportunity cost of holding noninterest-bearing money. The higher the lost income from holding money, the harder money holders work to invest their cash balances, and the higher the financial-investment velocity of money.

The relationship between the monetary policy index and long-term interest rates is approximately linear for equivalent cyclical conditions. This is a critically important relationship. It defines the key requirement for a permanent reduction in interest rates. Monetary ease or constraint causes cyclical fluctuations of interest rates relative to the index, but the underlying relationship is clear. Any permanent reduction in interest rates requires a permanent reduction in the monetary policy index.

MONETARY POLICY CURVE

Figure 1 shows Moody's AAA bond yields plotted against the monetary policy index for the period 1952–81. I call this plot a monetary policy curve because of its high informational content on monetary policies. Cyclical expansions are indicated by solid lines, and cyclical recessions by dashes. Monetary ease during the early stages of cyclical recoveries has typically permitted rapid—but unsustainable—acceleration of credit expansion without a material increase in interest rates. The monetary ease permits accelerated issuance of near money by financial intermediaries, providing a temporary stimulus to financial-investment velocity. Thus the cyclical pattern of the monetary policy curve is a horizontal movement generated by accelerating credit expansion under conditions of monetary ease, followed by a vertical movement as monetary restraints are applied and interest rates rise. There has been comparatively little reversal of the vertical movements in long-term interest rates during the past quarter century. The reason for this is the progressive increase in the monetary policy index.

Figure 1 shows both the progressive rise in long-term interest rates and the increased volatility that has been so widely discussed. The volatility in percentage points has increased substantially, but the volatility as a percent of nominal interest rates has been relatively stable. There appears to be a simple explanation for this observed behavior. Fluctuating supply and demand pressures in the new issues markets generate compensating fluctuations in the opportunity cost of holding money. Since the opportunity cost of holding money is measured by the level of nominal interest rates, the fluctuations are proportionate to that level. Thus high nominal interest rates result in high volatility of interest rates.

A negative yield curve becomes the norm as financial markets become more volatile. This cripples the long-term debt markets because few lenders can afford to borrow short from their depositors to lend long.

HOW TO REDUCE INTEREST RATES

What is the answer? The answer is to reduce the monetary policy index. Figure 2 shows the components of the index for the period 1952–81. In that period the percentage rate of increase in nonfinancial debt approximately doubled, and the economic size of the money supply declined by over 50 percent. The combined effect caused the index to rise from 0.25 in 1952 to 1.10 in 1981, over a fourfold increase.

CONTROL CREDIT AND MONEY GROWTH INDEPENDENTLY

A program should be developed to bring about a progressive reduction in the monetary policy index without the need for a deflationary depression to make it work. That requires an expansion of the money and credit control mechanisms administered by the Federal Reserve System. A dual control system is needed. It must be possible to limit credit expansion at the same time that the growth rate of the narrow money supply is increased. Japan, Germany, and Switzerland appear able to do this. We could too if we realized its importance. An outline of such a system is provided in the appendix.

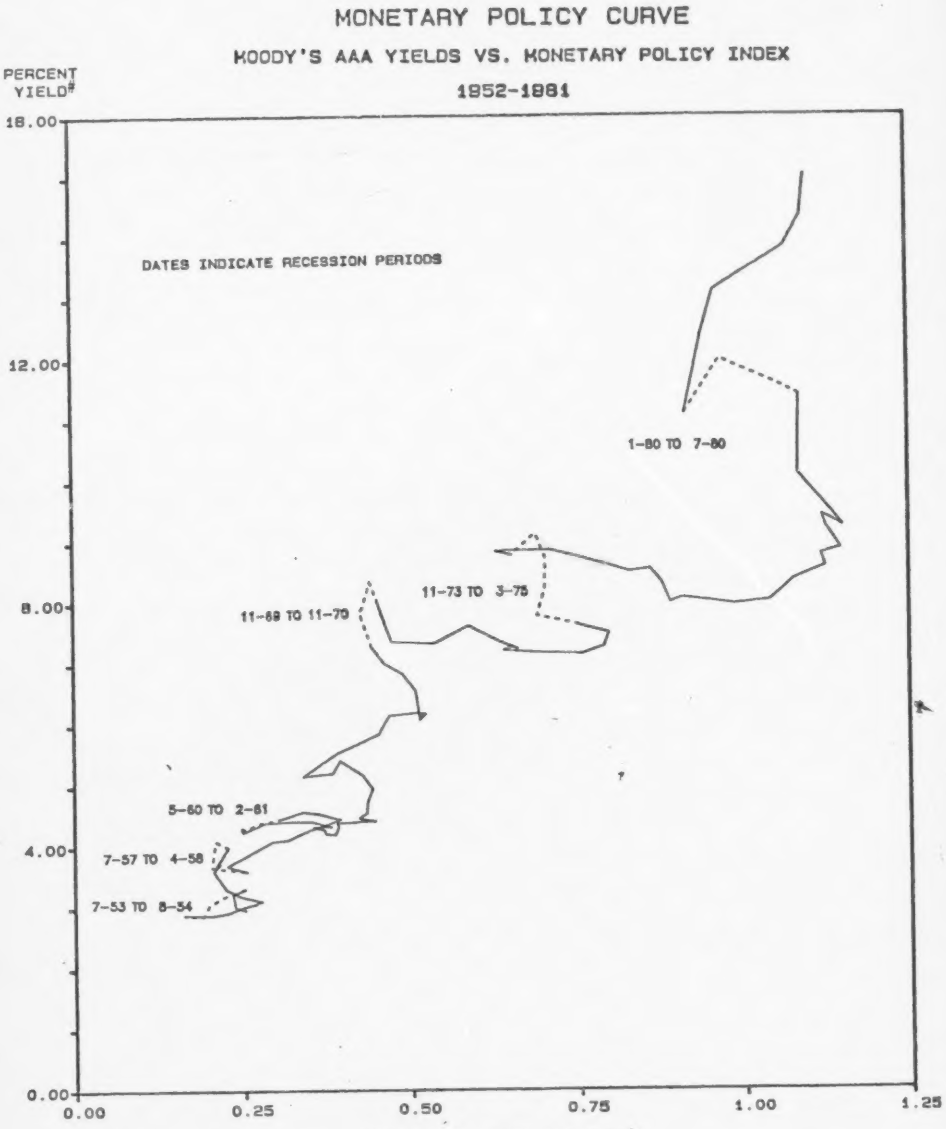
The sequence of the steps taken to correct the existing imbalances in financial structure is important. That sequence will determine the level and duration of unemployment. Nominal interest rates should be brought down ahead of any material reduction in the rate of credit expansion. Also, excessive real interest rates must be avoided if needed levels of capital investment are to be restored.

In summary, interest rates can be reduced permanently through a permanent reduction in the monetary policy index. The job can be done if we are willing to accept the necessary disciplines.

Thank you, Mr. Chairman, for the opportunity to testify.

[The charts referred to, together with the appendix to Mr. Wilmeth's statement, follow:]

FIGURE 1

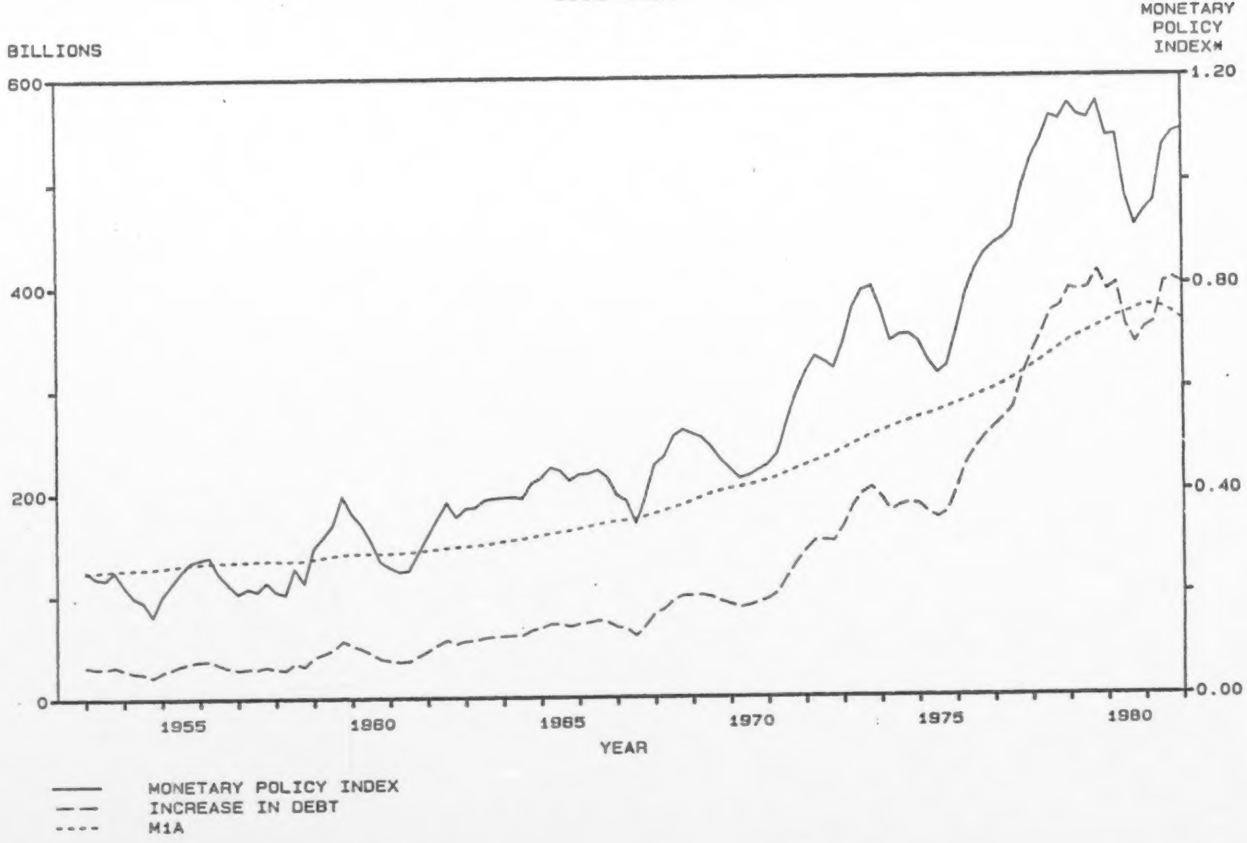


*4-QUARTER INCREASE IN NON-FINANCIAL CREDIT MARKET DEBT DIVIDED BY AVERAGE M1A.
#YIELD FOR FINAL QUARTER OF 4-QUARTER PERIOD.

FIGURE 2

COMPONENTS OF THE MONETARY POLICY INDEX

QUARTERLY FOR 4-QUARTER PERIODS
1952-1981



*4-QUARTER INCREASE IN NON-FINANCIAL CREDIT MARKET DEBT DIVIDED BY AVERAGE M1A.

APPENDIX

ILLUSTRATION OF A DUAL RESERVE SYSTEM DESIGNED FOR THE SEPARATE CONTROL OF INTEREST RATES AND INFLATION

The following outline of a dual reserve system suggests a way to give the Federal Reserve Board two controls to regulate money and credit in place of the single control they have today. The dual control system would have two principal objectives:

1. Reduce inflation through a progressive reduction in the rate of growth of aggregate non-financial debt. The intermediate target would be near money; defined as all interest-bearing liabilities of regulated financial intermediaries. Appropriate control over the issuance of near money could limit aggregate debt expansion. The control of debt expansion would limit inflation. Ultimately the growth rate of non-financial debt should be stabilized at the growth rate of real GNP plus whatever nominal inflation rate was tolerable (possibly 1-2%).
2. Reduce interest rates and restore a positive yield curve through a progressive reduction in the Monetary Policy Index (the annual rate of increase in non-financial debt per $1.00 of M_1A). The intermediate target would be M_1A. With aggregate credit expansion limited by the

control of near money, accelerated growth of M_1A would further reduce the Index and put downwards pressure on interest rates.

Thus separate control of money (M_1A) and near money would permit the independent control of interest rates and inflation.

I. Basic Description of Dual Reserve System

  A. Reserve Requirements for Demand Deposits

    1. The current reserve mechanism would continue, but would apply solely to non-interest-bearing demand deposits.

  B. Quotas and Quota Reserves for Interest-Bearing Liabilities (IBL's)

    1. A new quota system for IBL's of banks and other regulated financial intermediaries would be established.

    2. Each institution would have an IBL quota authorized and adjusted by the Federal Reserve in accordance with defined procedures.

    3. Initial IBL quotas would be established to support current IBL's plus an allowance for contingencies.

    4. Non-interest-bearing reserves equal to a specified percentage of the IBL quotas would have to be maintained on deposit at the Federal Reserve.

    5. IBL quotas could be non-transferrable, either by loan or by sale, if that contributed to the stability of

the system. Otherwise, some degree of transferability might be allowed.

6. A carry-forward of excess IBL quotas (dollar days) for up to 52 weeks might be allowed to accommodate seasonal demands.
7. The level of reserve requirements for the IBL quotas could be phased in, starting with the same percentages as at present (where such requirements exist) or with modest requirements where none exist currently. The initial reserve requirements could be adjusted appropriately as the financial markets stabilized and interest rates declined.

C. Allocation of IBL Quota Increases

1. Initial (across the board) rates of increase in aggregate quotas might be set and adjusted as needed to stabilize the ongoing rate of increase in private non-financial credit market debt.
2. The subsequent allocation of quota increases might be based on several factors, such as:
    a. The amount of ordinary savings account deposits. With appropriate limits on interest rates paid on such accounts, it should be feasible to provide minimum IBL quotas for each institution equal to (or some multiple of) total savings account deposits. This would permit unlimited acceptance

of such deposits. Thus quota restrictions would apply solely to higher-cost purchased funds.

b. The quota carry-forward position, with lower allocations to those with proportionately stronger carry-forwards.

c. Provisions of some type might be needed to permit more rapid expansion of IBL quotas for institutions in new or rapidly growing areas.

d. A portion of the quota increases might simply be sold by the Federal Reserve to the highest bidder.

3. After the financial markets stabilized, positive yield curves were restored and interest rates had declined significantly, a gradual reduction in the overall rate of increase in the IBL quotas could be initiated. This would continue until dynamic equilibrium was achieved in the economic size of the stock of domestic non-financial credit market debt at whatever minimum inflation rate was deemed acceptable.

D. Penalty for IBL Quota Deficiencies

1. In the event that current quota deficits exhausted all quota carry-forwards, interest at a specified rate could be charged on the quota deficiency. In addition, it might be required that the cumulative (dollar days) of quota deficiency be offset within a specified time period by the maintenance of excess quotas.

2. Stricter regulatory control could be exercised during any period when a cumulative deficit quota position existed, and possibly for a probationary period thereafter.

E. Forfeitures of IBL Quotas

1. Failure to maintain the required reserves for an IBL quota would cause a forfeiture of that portion of the quota corresponding to the reserve deficiency.
2. An excessive quota carry-forward position might provide a basis for a reduction in the on-going IBL quota.

II. Effects of Dual Reserve System on Banks, Savings & Loans, etc.

A. Limitation on Interest-Bearing Liabilities

1. Under current regulatory controls banks and other financial intermediaries are able to buy additional loanable funds to meet loan demand.
2. This permits banks, etc. to incur higher loan ratios and to issue forward commitments with minimal concern about their own liquidity.
3. The historic record demonstrates that the present banking and monetary control system produces:
    a. Instability in the aggregate rate of credit expansion
    b. Marked fluctuations in the rate of credit expansion for particular end uses, such as housing, consumer durables, business investment, etc.

4. By limiting the availability of loanable funds, the dual reserve system would force a new sense of responsibility on banks, etc. to optimize on the usage of available funds and to avoid overcommitting. It would decentralize some of the responsibility for maintaining the liquidity of the economy from the Federal Reserve to individual banks.

B. Reduced Cost of Funds to Banks, etc.

1. Under the dual reserve system, the Federal Reserve would be able to create excess reserves without affecting the authorized quantity of interest-bearing deposits, CD's, repos, etc.

2. Banks with excess reserves would loan or invest those funds. That action would transfer demand deposit balances to the public, who in turn would seek to convert them to some interest-earning form. However, the banks would be limited by their IBL quotas in the aggregate amount of funds they could accept.

3. The resultant increased availability of interest-bearing funds to banks, etc., would progressively reduce the need to buy high-cost funds in the money markets. Shifts in supply and demand relationships would take place;

    a. The establishment of excess reserves would put sharp downward pressure on the federal funds rate.

b. The effect of declining federal funds rates would spread rapidly to other short-term rates, restoring a rising yield curve by length of maturity. The decline in short-term rates would spread slowly to long-term rates.

c. As a positive yield curve persisted and financial investors recognized the probability of permanent declines in interest rates, financial-investment demand would shift from short-term issues to long-term bonds and mortgages. This would progressively restore the long-term debt markets that are so important to capital investment.

C. Effect on Solvency of Thrift Institutions

1. The combination of a reduced cost of funds and the limited supply of loanable funds for ultimate borrowers would restore the profit margins of the Thrifts.

2. The progressive decline in long-term interest rates would gradually restore the market value of the long-term portfolio holdings.

III. Tax Revision to Prevent By-Passing of IBL Quota System

A. Non-regulated intermediaries designed to by-pass the IBL quota controls would develop if not restrained.

B. Excessive usage of debt financing by business is stimulated by the preferential tax treatment of interest expense relative to dividends.

C. Equal tax treatment of interest expense and dividend payments could ease both of the above problems. For example:

   1. Interest expense and dividend payments might both be made 50 percent deductible for federal income tax purposes, except:

      a. The interest payments of financial intermediaries subject to the IBL quota system would continue to be fully deductible, and

      b. A safety net could be provided for hardship situations.

D. Any financial intermediary might be allowed to elect to be subject to the IBL quota system and thereby qualify to deduct all its interest expense for federal income tax purposes.

E. To limit by-passing by offshore lenders, a suitable withholding tax might be needed on interest paid to them by domestic borrowers.

IV. Monetary Policy Experience of Other Countries

A. United States, United Kingdom, and Australia

   1. None of these countries appear to have an adequate means of restraining credit expansion independent of the money supply.

   2. All have exhibited a progressive decline in M_1 per $1.00 of GNP since the second World War. (Figure 1)

3. All have exhibited a progressive increase in nominal interest rates during the same period. (Figure 2)

B. Germany, Switzerland and Japan

1. All of these countries appear to have an independent means of restraining credit expansion.
2. None have exhibited the steady progressive decline in M_1 per $1.00 of GNP found in the first group of countries. (Figure 3)
3. None have experienced the extreme increases in interest rates found in the first group of countries. (Figure 4)

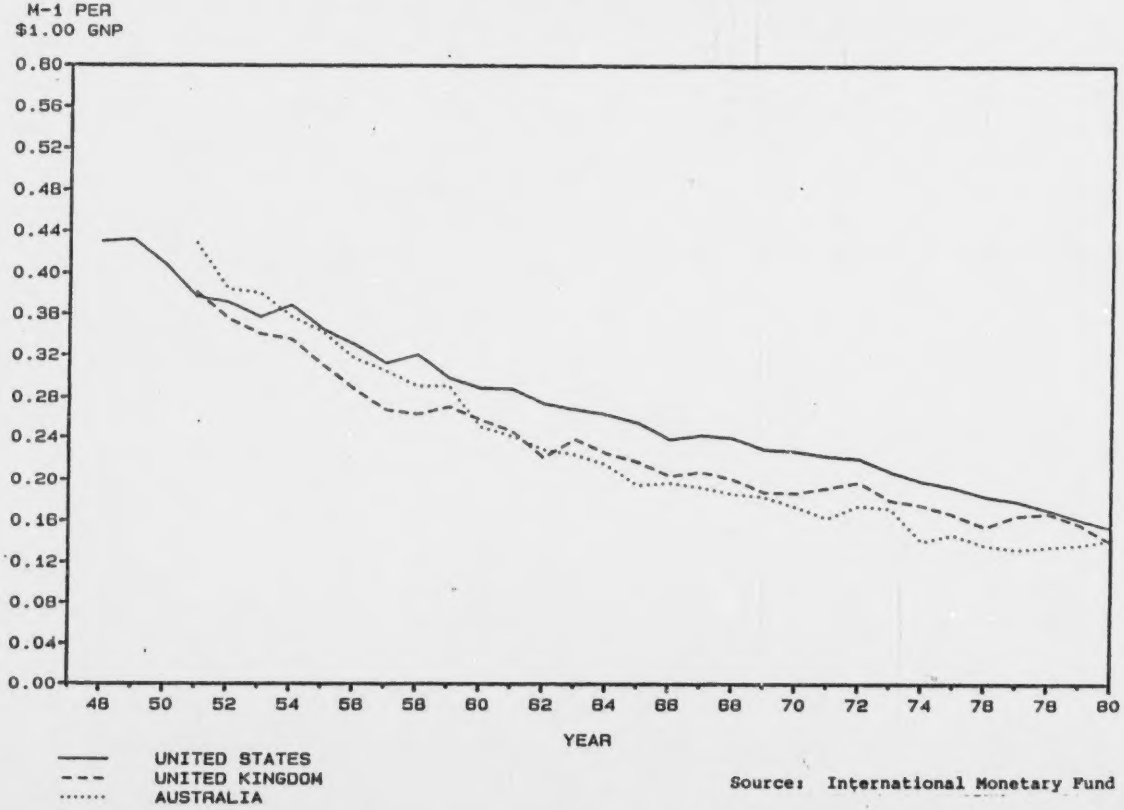
C. Money Growth versus Inflation

1. The United States, United Kingdom and Canada experienced higher inflation than the money growth rate during the five years ending in 1980.
2. Germany, Switzerland and Japan experienced lower inflation than the money growth rate during the five years ending in 1980.

FIGURE 1

M-1 PER $1.00 GNP

UNITED STATES, UNITED KINGDOM, AUSTRALIA

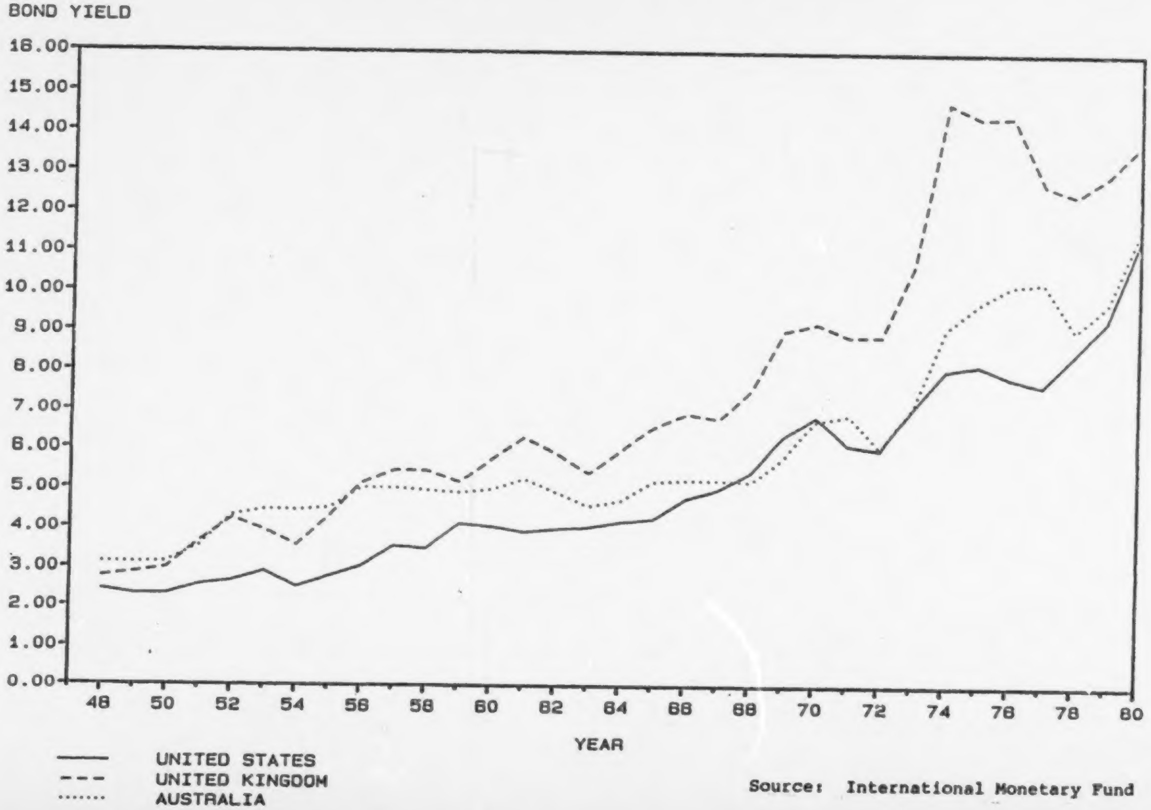


Source: International Monetary Fund

FIGURE 2

PRIME LONG INTEREST RATES

UNITED STATES, UNITED KINGDOM, AUSTRALIA

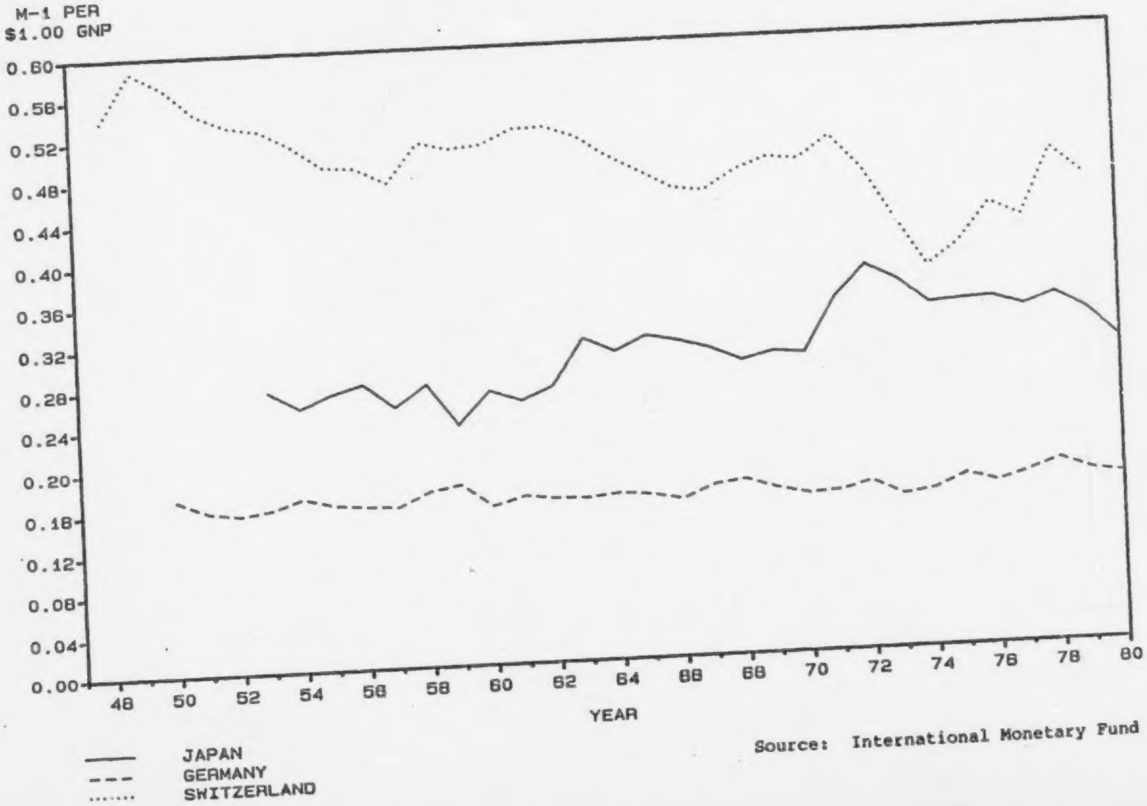


Source: International Monetary Fund

FIGURE 3

M-1 PER $1.00 GNP

JAPAN, GERMANY, SWITZERLAND

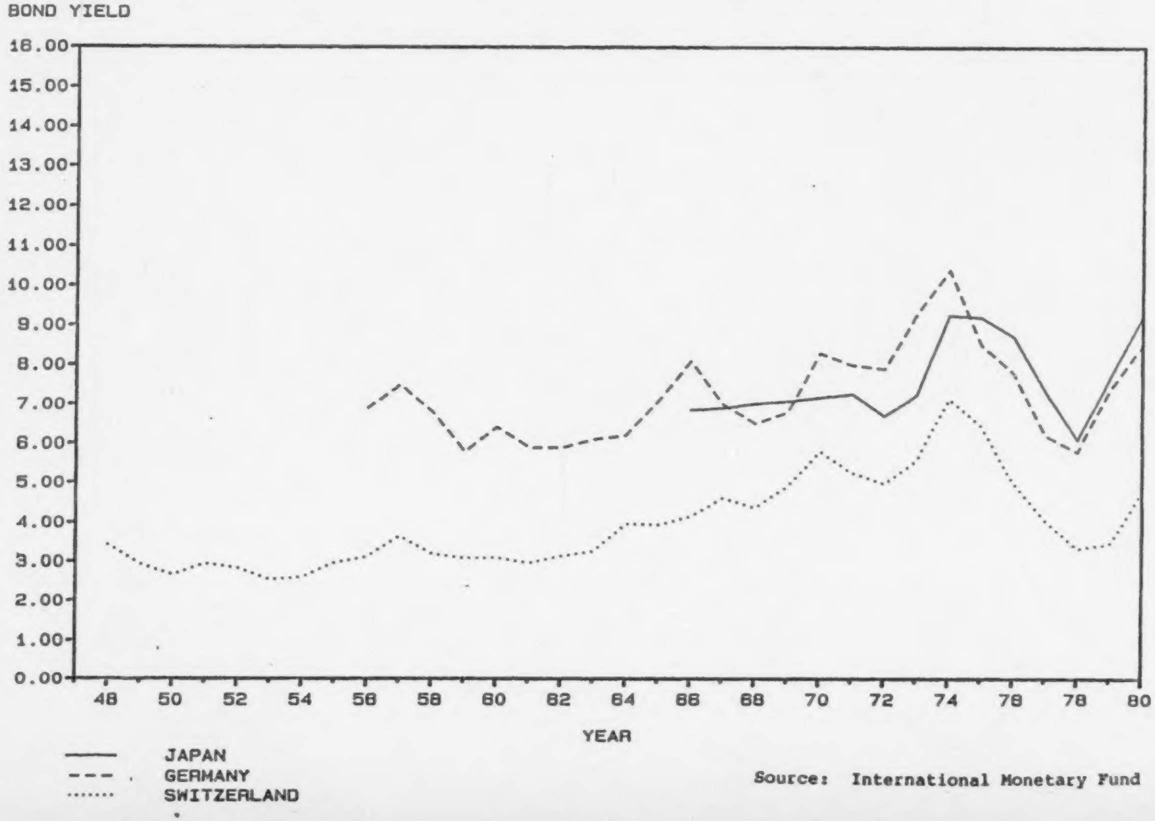


Source: International Monetary Fund

FIGURE 4

PRIME LONG INTEREST RATES

JAPAN, GERMANY, SWITZERLAND



Source: International Monetary Fund

Representative REUSS. Thank you, Mr. Wilmeth. I would point out that you, responsive to our rule, have completed your oral statement, but there follows an appendix in which you manfully set out to detail how to carry out your proposal for a dual reserve system which will be before us. I'll have some questions to ask you about it. Mr. Hotson, please proceed.

STATEMENT OF JOHN H. HOTSON, PROFESSOR OF ECONOMICS, UNIVERSITY OF WATERLOO, WATERLOO, ONTARIO

Mr. HOTSON. Yes, Chairman Reuss. This will be somewhat of a variation on a theme because, as you probably recognize, much of what is in my prepared statement has already been said very ably by Mr. Sommers and Mr. Wilmeth.

Most people know that the economy is in bad trouble but relatively few understand what the real causes are and what the real problems are.

The administration thinks the problem is inflation and that high interest rates are the solution. But as Mr. Wilmeth has been saying, overindebtedness and imbalances in the economy are really the basic problem and high interest rates only make these basic problems worse. It's the overindebtedness of the private sector I'm talking about rather than the public sector. The only strong borrower left in the system now is the public sector.

THE RAPID GROWTH OF INTEREST PAYMENTS

Since World War II, the private sector has increased its indebtedness four times as fast as real GNP has increased; it's increased its indebtedness twice as fast as the nominal GNP has increased; it's increased its interest payments twenty-six times as fast as real GNP has increased; and it's increased its interest payments 6 times as fast as even nominal GNP has increased.

It's this rapid runup of interest payments and new borrowings, where both have increased as a percentage of GNP, which has made the financial system of the economy—and not just of this country—so fragile.

Well, quite a bit of this has already been said, so let me skip on to my figure 2 of the prepared statement. I show what's happened to the indexes of different income categories and GNP from 1950 to 1981: real GNP reaching from an index of 1 to 2.8, a net increase of 1.8 times, but nominal GNP increasing 10.2 times. All categories of income which increased more than 2.8 times you might say have participated in inflation. Unless they've increased less than 10.2 times then they've fallen as a percentage of GNP. What we see there is that business or the residual claim of profit has not kept up. It has shrunk as a percentage of GNP, while employee compensation or wages have gone up faster than nominal GNP. The diagram is dominated by the phenomenal explosive growth of net interest that's increased about 71 times, compared to real income which has increased only 1.8 times. That's a totally unsustainable growth. It's still a minor component of gross national product, however, but it has increased from 1 percent to 7 percent; that's almost as much as the percentage increase in wages, the dominating category.

HIXSON'S HELIX

I have quite a bit more to say on that that I'll skip over. The central point I want to make begins with what I call Hixson's Helix.

As William F. Hixson fully documents in "Some Aspects of Interest and Reaganomics," the U.S. economy only prospers in years in which private deficit spending, which he calls PDS, exceeds interest payment on existing private debts, or private debt interest [PDI] by some 40 to 60 percent. In years in which PDI exceeded PDS a recession occurred. He also demonstrates that the private sector has found it increasingly difficult to increase its debts faster than its interest burden increases, "despite the herculean efforts of the Federal Government to facilitate the process by loan guarantees, interest rate subsidies, tax cuts, panic orders for poorly planned military hardware, import-export subsidies, and expansion of the money supply at such a rate as to permit private debt to increase more from 1973 to 1980 than from 1789 to 1973."

So we come to figure 3 showing this explosive growth, this cyclical pattern. I'd like to focus on that diagram. On the horizontal axis we have total debt interest as a percentage of gross national product, and on the vertical axis we have total deficit spending as a percentage of gross national product. The 45-degree line represents all the points where the two are the same, percentage of gross national product. Each cross represents 1 year, going from 1967 to 1982. The thing that dominates the diagram is this explosive spiral upward with a larger and larger fraction of gross national product being borrowed and spent—deficit financing—the peak being 22.2 percent of gross national product financed in 1978.

But the other thing which is very clear is that the economy doesn't just spiral in one place, but is increasing the percentage of both total deficit spending and total debt interest, and that can only go on so far. Nobody knows what the peak is—whether we could actually deficit finance half of GNP, I rather doubt it—but somewhere up there is a limit to where the economy can go.

We seem to have hit some kind of crisis clearly in 1980 where the economy comes down into a recession year. All the years below are not near the 45-degree line of recession. We have come to a deep recession, as we all know, and instead of going back on a high-deficit-finance spiral we've gone off into a depression spiral.

One thing you might say of the diagram is that in traveling in the north-northeast direction the economy, in the 1970's was spiraling toward hyperinflation, higher and higher rates of inflation. Now, going off in a east-northeast direction below the 45-degree line, it is heading toward a debt-repudiation crisis, heading toward a great depression.

Well, we don't want to go to either of those places. We need to develop some kind of sustainable system where the economy stays in the north-northeast quadrant without going to higher and higher levels of deficit finance. We need to have small tight circles in the north-northeast quadrant. That's what the economy needs. We don't have the institutions to do that. Maybe we've had a part of that new system proposed to us today by Mr. Wilmeth to keep us from this never-ending spiral upward or then this miserable attempt to control that unsustainable growth by having a deep depression—which is all monetarism or Reaganomics can offer to us.

A PROPOSAL FOR TAX BONDS TO FINANCE GOVERNMENT

As for solutions, I agree with my fellow panelists that we need some new solutions. I have some partial solutions to propose. One of them is the tax bond which is the method of financing the Government between the hard-fisted tax collector—"pay up or go to jail"—and the wheeling bond peddler of "will you please buy these bonds at competitive interest rates." We could cut taxes and require people to take the tax cuts in the form of tax bonds, low-interest-rate bonds like we had back in World War II. We could make further situations where a person could or a corporation could cut their taxes still further for every dollar reduction in their taxes they had to buy more than a dollar's worth of these bonds. This would be, of course, only a partial solution to the problem.

INCOMES POLICY

I go on to talk about incomes policies; it's something that we always have. An economy always has an incomes policy. We happen to have pretty bad ones. I show that Canada where I'm teaching has even worse incomes policies than the United States as shown by the fact that with the same monetary policy the United States has got some reduction in its inflation rate while Canada so far has not. It's a difference in incomes policy in general rather than monetary policy which is a component of that incomes policy specifically. Well, the paper spells this out.

NATURAL RATE OF INTEREST

Finally, I point to the work of Luigi Pasinetti in providing economists with something they's always lacked—what they've lacked ever since they gave up on the Bible in the Catholic Church—a theory of long-run rate of interest or natural rate of interest as a productivity gain of the economy. We've had market rates of interest set by supply and demand that tend to be far too high for sustainable economy. They give us boom and bust. They give us this cyclical pattern.

Since Keynes we've gotten better at living with this cyclical pattern, moderating it. We've had about 40 good years but we've given ourselves this tremendous interest-rate, interest-payment, interest-income problem. We need to do more.

We need to adopt another concern of Keynes to get those interest rates back down again. He had page after page in "The General Theory" stressing the need to keep interest rates down, stating that the tendency was for these long-run interests to be far too high for a sustainable full employment growth.

[Mr. Hotson's prepared statement, together with several papers and articles relative to monetary policy, follows:]

PREPARED STATEMENT OF JOHN H. HOTSON

Economic Crisis and the Seven Summiteers--

The seven leaders of the western world have flown home from the eighth economic summit and the world economic crisis continues. Any agreements they may have come to - open or secret - to bring down interest rates and expand world income, employment and trade by joint action can only be applauded. Any failure to come to such agreements, and to take vigorous action to follow up such agreements, can only be condemned, because such failure might well be the "last straw" that breaks the international financial system's back. Waves of bankruptcies; both international-with Argentina and Poland the first on a long list of defaulters, and domestic defaults by large as well as small business,daily threaten to return us to scenes of financial panic not seen since the 1931-3 period, when the world's leaders fiddled and fumbled their way into the Great Depression.

By declaring "war" on inflation, and then fighting this "enemy" with ineffective and even counterproductive weapons, the industrialized nations have succeeded in converting the two "oil shocks" of the 1970s into the "Great Stagflation" which still continues. At present 30 million persons are unemployed in the 24 O.E.C.D. nations alone. Furthermore, some 300 million are unemployed in the less developed nations of the "South." In the 1973-1982 period the world economy has lost several trillion dollars worth of real output which would have been achieved had the growth rates of the 1950-1972 period been maintained. Meanwhile a billion human beings remain seriously undernourished and some 15 million die annually of hunger in a world which produces more than enough food for all. Instead of solving the real economic problems of both "North" and

"South" by taking the vigorous action pledged at Cancun to "eradicate" hunger "within as brief a period as possible," world leaders have seemed content to let these matters wait while they focus on a never ending, no win, "war" on inflation.

Bad Theory- the Source of Bad Policy

If we are to convert the present retrograde motion of the world economy - both "capitalist" and "socialist" - into the steady advance we all want to achieve, and are technically able to achieve, we need drastically different economic policies than those which brought us to our present impass. Since economic policies, at least in part, flow from economic theories, we need to re-examine and discard those aspects of present theories; whether "Smithian," "Marxian," "Keynesian," "Monetarist," or "supply side" which experience has demonstrated to be faulty, while incorporating valid insights from whatever source.

Our barriers to understanding and changing our situation are:the difficulty most of us have in learning anything new after we are thirty, and the myth of "no solutions." It is really a pity that it is not practical to recall defective graduates and "retrofit" them once a university realizes its professors mis-educated them. For a defective car is a menace for only a dozen years or so before it succumbs to wear and acid rain, while defective economics graduates have 40 years or more to wreck havoc before they go to meet their Maker.[1]

The world's present political, business and academic leaders are the most intelligent, well motivated and highly educated the world has ever seen. If everything they had been taught during their malleable years in school had been true I have no doubt that they would have long since solved the world's economic, social, and armaments problems. However, as a candid President of Harvard University is supposed to have told a graduating class, after the usual congratulations, "About one-half of what we have taught you is true, and about one-half is false, and we have no idea which half is which. Your task and ours is to improve this ratio." Few would hold that the natural sciences--which not long ago taught that the world was flat, that rockets could not travel through a vacuum and that bleeding patients with leeches would cure all ills--are now 100% error free. However, it is the social sciences which so bring down the truth content ratio of a Harvard education.

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[1] See, however, my piece, "They Recall Cars, Don't They? Why Not Central Bankers?" Congressional Record, April 28, 1982, H 1643-5, in which I nominate Paul Volcker, Chairman of the Federal Reserve Board, as the world's foremost candidate for recall (to Princeton) and retrofit. The Canadian version of this article (featuring Finance Minister A. J. MacEachen and Bank of Canada Chairman Gerald Bouey) has appeared in three newspapers, while U. S. editors have yet to make use of it.

Among the social sciences, economics has at least its share of error, as I am sure most members of this committee have long understood. Perhaps the worst errors in economic "science" are in the area of interest, interest rates, interest costs, interest incomes, and the role of interest in determining the price level. As George Horwich once wrote, economists have never satisfactorily integrated their theories "of interest as a production cost, as a return to the claimants of capital, and as a variable in monetary policy."[2]

This "dis-integration" of the theory of interest has led economists to wholly erroneous policy advice which has contributed mightily to the stagflation of the world economy. For economic "science" has long taught that high interest rates are anti-inflationary--indeed the majority of economists still teach this--when it cannot possibly be true. For interest is a cost, and when costs go up prices go up, not down. On this Sherman J. Maisel, a former member of the

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[2] George Horwich, "Tight Money, Monetary Restraint, and the Price Level," Journal of Finance, XXI March 1966, pp. 15-33, quote is from p. 16. Horwich's attempt tc provided a rationale for the conclusions of normal economic "science" is, to my mind, wholly unsatisfactory. See my comment, "Tight Money as a Cause of Inflation," and Horwich'"Reply" in Journal of Finance, XXVI, March 1971, pp 152-7.

Federal Reserve Board has written:[3]

> "Whatever their indirect impact, the direct effects of interest rate rises are inflationary. Interest plays a major role in the consumer price index, especially through the housing and consumer credit component. It is a large factor in utility costs. Regulatory agencies allow interest increases to affect rates and prices almost immediately. Movements of interest rates increase the uncertainties and therefore the risks and costs of doing business."

It is thus on the "indirect" effects of interest hikes that those who advocate them as inflation cures must pin their hopes. They hope that interest inflation will be more than offset by wage and profit deflation because of the unemployment such policies cause--that for every dollar of interest inflation there will be more than a dollar of wage and profit deflation so the net effect will be favorable. Also, high interest rates raise the foreign exchange rate (until other countries follow suit) which reduces import prices.

Advocates of the "class warfare" which a high interest rate policy entails, appear to care not at all that a policy of deliberately causing unemployment is immoral--and even illegal under the act which set up this committee. The Employment Act of 1946 requires all organs of the U. S. government--which certainly includes the Federal Reserve System--"to use all practicable means...to promote maximum employment, production, and purchasing power." They are likewise undeterred by the reflection that though unemployment brought down wages in the "good" old days before unemployment compensation-because the jobless would rather work at any wage than starve--that this "favorable" effect is much weaker today. Indeed, when Chairman Volcker's policies force Americans into layoffs he is reducing supply more than he is reducing demand, thus increasing the price level. Every job lost reduces supply by the worker's full marginal product; but unemployment compensation gives him/her a fraction of the lost income back to keep on demanding goods.

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[3] Sherman J. Maisel, Managing the Dollar, Norton, 1973, p. 18.

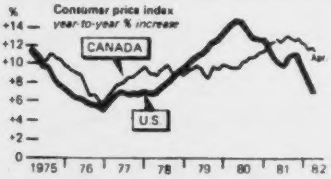
Perhaps some, at least, can be persuaded to abandon the high interest coterie if it can be shown that instead of decelerating inflation, rising interest rates are accelerating the economy into financial collapse. I turn to this task in just a few pages. First I wish to deal briefly with the argument that inflation is moderating in the U. S. because of high interest rates, and with the "no solutions" assumption regarding stagflation.

President Reagan and Chairman Volcker are currently congratulating themselves because the rate of inflation has moderated considerably in the U. S. in recent months. They attribute this moderation almost solely to the high interest, tight monetary policy with perhaps a nod toward the "favorable expectations" generated by deregulation, cuts in non defense spending, and tax cuts currently in place and promised. Certainly they give no credit for the moderation to "incomes policies" - that last refuge of the unsound and "sociological" economist.

It is my contention that Reagan and Volcker have misunderstood the real reason for their modest success, and that what is happening in Canada is the best evidence for this. As Figure 1 makes evident, while in April the year over year rise in the C.P.I. in the U. S. fell to 6.6%, it continued at 11.3% in Canada. Since Canada has even more ferocious interest rates (which are non-deductible for house owners and consumers) than the U. S. and a negative growth of M_1, Canada "should" have less inflation than the U. S. Since Canadian tax cuts flowing from the 1974 indexing of her income tax have been far more generous that the cuts only promised in the U. S., Canada should, according to Reaganomic thinking, be enjoying higher levels of employment and growth of productivity than the U. S. Instead, Canada has even higher unemployment, reaching 10.2% in May, and a miserable .2% rise in productivity, versus a weak .6% in the U. S. The Canadian Federal Government has also greatly slowed the growth of its expenditures and off loaded many financial burdens upon the provinces, which in turn have cut the rate of growth of these programs.

Figure 1

Prices



The gap between the Canadian and U.S. consumer price indexes is still wide, with our year-over-year rise in April at 11.3% vs 6.6% south of the border.

Source: The Financial Post, June 5, 1982, p. 10.

What then accounts for the differing experience of the two countries in "reining in inflation"? Despite his "free market" and anti-interventionist image President Reagan has intervened frequently, effectively, even ruthlessly, to keep U. S. wages down, while, despite his activist, interventionist image Prime Minister Trudeau has not. The Reagan administration has held federal workers to 5% wage increases for two years now, while demoting and R.I.F.ing many thousands of them. In Canada, federal sector wage increases have been more than 11% over the same period, while provincial wage increases have been even larger. In the past two years the U. S. Congress has voted itself 5.5% salary increases--though Senators can now moonlight without limit in outside speech making. Last year Parliament voted itself a 47% wage increase. President Reagan ruthlessly crushed the illegal aircontrollers strike and fired them all. In Canada most government workers are free to strike and many do; the postal workers do so annually. The policemen, nurses, hospital workers, doctors etc. legally can't strike, and when they do anyway they are more likely to be rewarded than punished. (Ironically the Ontario nurses and hospital workers strike was crushed, but the doctor's strike led to a large increase in doctors' fees and no retribution.)

Before the Carter and then the Reagan administrations bailed out Chrysler Corporation with $1.5 billion in loan guarantees, they exacted huge "give backs" in wage and benefit increases foregone, from the United Auto Workers. These give backs were then extended to General Motors and Ford. The Canadian and Ontario governments extended similar guarantees to Chrysler Canada without exacting any such sacrifices from Canadian auto workers. The Canadian U.A.W. has adamently refused any and all wage concessions, and the Canadian Labour Congress last week threatened a general strike if the Government imposes give backs or wage controls. Thus Canadians seem determined to have all the disadvantages of the present depression without achieving any of the "benefits."

In short, a major difference in incomes policies, together with well known differences in oil pricing policies, account for the very different degree of "success" achieved by virtually identical monetary policies in the two countries. Indeed, as we shall see, if and when we ever do end inflation it will be because we have created and applied the incomes policies necessary to do so.

"No Solutions"

One of the chief barriers the human mind sets up to the solution of problems is the immediate assumption that problems which have not been solved are insolvable: that all possible solutions have already been tried and have failed. Though some problems are, no doubt, insolvable, all progress in economic policy, as in all other aspects of life, have resulted from pushing through the myth of "no solutions" to find and apply feasible solutions.

Nothing could be further from the truth than the myth of "no solutions" to inflation control with full employment. We have known how to combine full employment with stable prices ever since Worl War II--when we fought the biggest war in history with the least inflation in history. What has been lacking is not the means to combine prosperity with price stability, but the political will to apply these means.

When persons or societies are unwilling to solve their problems and yet they feel _something_ must be done, they make gestures. They do something that doesn't work, that they know doesn't work, but which indicates that they are "working" on the problem -- and they tell lies. If the problem is very large the gestures and the lies are correspondingly so.

Tight money as an inflation cure is a multitrillion dollar gesture. The oft repeated claim that "governments should never have incomes policies because they never can work, never have worked, and never will work," is a lie. All countries always have had, and always will have, incomes policies and they always work.

Incomes policies are the net result, whether intended or unintended, of all government policies upon the rate of growth and distribution of income. The present incomes policies of the United States include her anti-trust laws--which are a frail barrier to the wave of super concentration through mergers now underway; her labor relations laws, which have kept her unions weaker than in most democracies; her tariff laws, which discriminate against the lowest cost producers in the third world; her agricultural support prices, her minimum wage laws, and much more. Is it any wonder that,with incomes policies like these at work, we manage to have double digit inflation together with near double digit unemployment?

Monetary policy is itself a potent incomes policy. It is also a very indirect, inefficient, and unjust way to attempt to slow incomes inflation. What tight money does is to decrease the pace of investment--upon which the pace of real income growth largely depends, decrease the incomes of farmers and other small businessmen, and their employees, while at the same time increasing the incomes of bankers and others with money to lend. All this is done in the hope that if there is enough "slack" in the economy--sufficient unemployment and bankruptcy--the next round of wage and price increases will be smaller. Surely we can do better than that.

Like Moliere's *Bourgeois Gentilhomme*, who had been speaking prose all his life without realizing it, the world's governments have always, likewise unconsciously, practiced incomes policies. And some are a lot better at it than others. Because their incomes policies are even worse than those of the U. S., the United Kingdom, Italy, and Canada manage to have even worse inflation and unemployment problems. Because their incomes policies are the best in the world, Switzerland and Japan have been able to ride out the two OPEC oil shocks better than other countries although neither of them has any oil of its own. West Germany has also done better than most countries at applying rational incomes policies.

All sensible discussions of incomes policies must start from the recognition that we already have incomes policies which work, and work to give us stagflation. What we need to design are incomes policies which will give us the desirable outcomes we seek--full employment and stable prices. *A good incomes policy is easy to specify, if harder to achieve--A good incomes policy works to cause money incomes to grow only as rapidly as the full employment of human and nonhuman resources allows our real output to grow, and for this growing real output to be equitably distributed*. Thus, if real output can grow only 5 per cent a year, then total money incomes should grow by 5 per cent a year, not 14 per cent, as at present. Before attempting to provide some guidance to building up such good incomes policies, let us survey some three decades of bad incomes policies which have brought us to our present peril.

U. S. Income Experience 1950-1981

Table 1 and Figure 2 provide comparisons between important indicies of income categories from 1950 to 1981. Whereas real, or constant dollar, GNP grew only 1.8 times in three decades, nominal, or current dollar, GNP grew 9.2 times as the price level more than tripled. All categories of gross income which increased more than 1.8 times from 1950 to 1981 "participated" in inflation. However, categories which increased less than 9.2 times decreased as a share of GNP. Several things are striking about Table 1 and Figure 2

TABLE 1 GNP and Sub-Categories

	1950	1981	$\frac{1981 - 1950}{1950}$
	(Billions of Dollars)		
GNP at Constant (1972) Prices	$534.8	$1,509.6	1.82
GNP at Current Prices	286.5	2,922.2	9.20
Capital Consumption Allowances	23.5	321.5	12.68
Indirect Business Taxes	23.4	251.2	9.74
Compensation of Employees	154.8	1,771.7	10.45
Farm Proprietors Net Income	13.7	22.0	0.61
Non-Farm Proprietors Net Income	25.0	112.4	3.50
Net Rental Income of Persons	7.1	33.6	3.73
Net Corporate Profits	33.9	189.0	4.58
Before Taxes	42.9	230.2	4.37
After Taxes	25.0	153.9	5.16
Dividends	8.8	63.1	6.17
Undistributed Profits	16.2	90.7	4.60
Net Interest	3.0	215.8	70.93

Source: Economic Report of the President; February 1982

Over the three plus decades small business did very badly, particularly farm proprietors, whose real income fell greatly. Corporate profits, and all subcategories of corporate profit,fell as a proportion of GNP. Compensation of employees rose faster than nominal GNP, lending weight to the "wage push" inflation thesis, and Net interest rose a phenomenal 70.9 times! Who would argue that we should attempt to stop inflation by raising wages, or profits 70 fold when real output has increased less than 2 fold? Yet so confused is present day economic theory that otherwise clear thinking economists have advocated interest hikes as inflation cure alls.

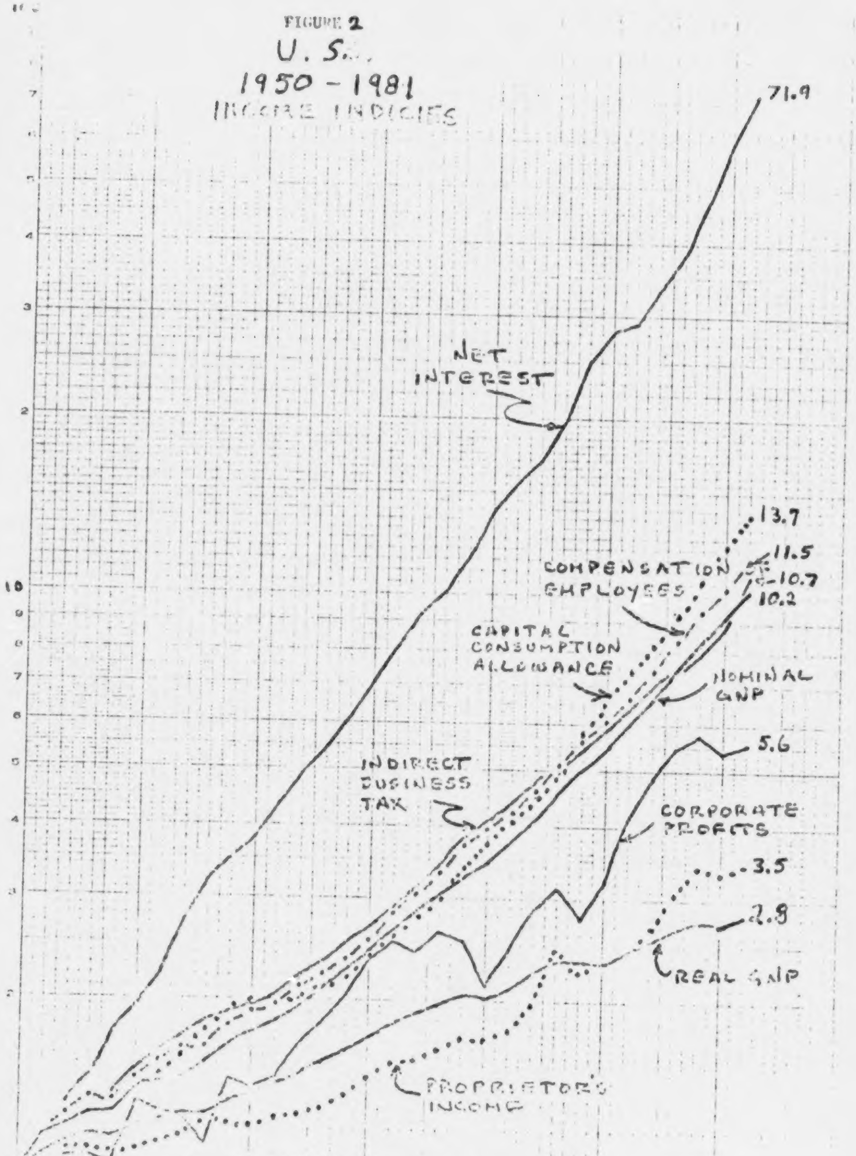


FIGURE 2
U.S.
1950 - 1981
INCOME INDICIES

As a further comparison, Net interest was only 22 per cent of Farm proprietors income in 1950, while it was 981 per cent of fram income in 1981. (As a still further comparison, Personal interest income, which includes public debt interest, was $9.7 billion in 1950 and $308.6 billion in 1981; thus 71 per cent of farm income in 1950 and 1,403 per cent of farm income in 1981!)

In Figure 2, Farm and Non-farm proprietors income is combined to produce the line labeled "Proprietors Income", and the imputed income category Net rental income of persons is omitted. The diagram is visually dominated by the explosive growth of Net interest. And as the semi-log format of Figure 2 makes evident, the rate of increase of Net interest has been high, and all but constant, since 1950. Defenders of the "conventional wisdom" are quick to point out that Net interest was only 1 per cent of GNP in 1950, virtually an all time low, and that it is today only 7.4 per cent of GNP, or still not too significant. However, the rise of the share of the small "rentier" category of income has squeezed down the "gross profit residual" virtually as much as the slow rise of the massive wage share. Thus in 1950 Employee compensation was 54 per cent of GNP and in 1982 it was 60.6 per cent. Thus the wage share gained 6.6 per cent of GNP between these years, and the rentier share gained 6.4 per cent. Inflation is routinely blamed on wage gains in excess of labor productivity gains, but who would argue that the productivity of borrowed money has increased explosively over the post World War II era? Interest rates are 4 times higher now than in 1950; is the "marginal productivity" of a dollar 4 times greater?

The faster growth of net interest than of nominal GNP is the product of the fact that Total Debt has grown faster than has GNP and the fact that interest rates have increased. As I show in the paper submitted to the Joint Economic Committee entitled, "Can Capitalism Survive Its Economists?", Total Debt increased 10.9 times (from $472.9 billion in 1950 to $5,617 billion in 1981) while GNP increased "only" 9.2 times. The fact that Net interest increased more rapidly than Personal interest income (which increased "only" 30.8 fold) also reflects the fact that it has been the private sector, rather than the public sector which has been increasing its debts at a rapid rate. As William F. Hixson ably shows in the paper, "Some Aspects of Interest and Reaganomics," which I have submitted to the J.E.C., the private sector since WWII has been increasing its indebtedness twice as fast as it increases its nominal income (and thus roughly eight times as fast as it has increased its real income) and it has increased its interest payments six times as rapidly as it has increased its nominal income.

Monetary Interest Paid on a total indebtedness of $5,617 billion in the U. S. in 1981 reached the staggering sum of $750 billion--or about the size of GNP in 1966. Thus the average rate of interest was 13.4%. In contrast, Americans owed eachother only $534.8 billion in 1950 and paid eachother interest of $16.6 billion, or an average rate of 3.5%. Only some 41% of Monetary Interest Paid (MIP) becomes Personal Interest Income, the remaining 59% is absorbed by the banking and financial structure,entering GNP as wages and profits of financial & non-financial corporations, or, in the case of interest on public debt, is excluded from the calculation of GNP.

It cannot be too strongly stressed that the disproportionate growth of interest that we have seen for the past three decades is not sustainable; for if it were sustained we would in a few years find Monetary Interest Paid greater than GNP -- an impossible situation. MIP is so large, and growing so rapidly, (44.2 times as large as in 1950) that in 1982 for the first time the increase in MIP will exceed the increase in the wage bill. Furthermore, as I show in "Can Capitalism Survive Its Economists?", should both MIP and wages increase in the future as they have in the recent past, by 1988 MIP will exceed

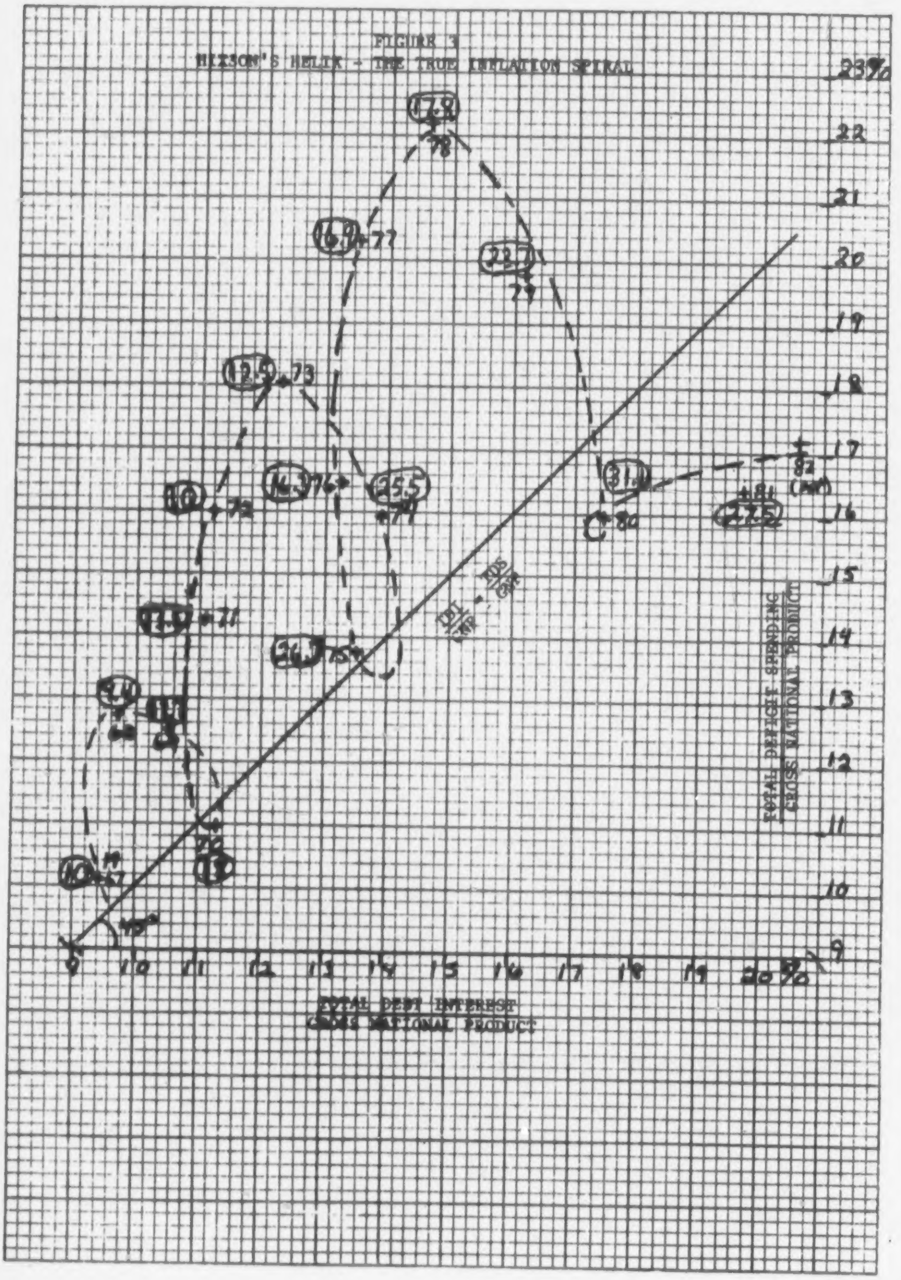
Employee Compensation! We should in that year be paying eachother $4,119.5 billion in interest, or not much less than the total debt burden in 1979! I do not believe that it is possible for MIP, which provides the income of our financial sector and a small group of wealthy "rentiers", to become equal to Employee Compensation--which provides the income of some 80% of the population. Either the pace of the growth of MIP must be reined in, and soon, or the pace of growth of employee compensation will rise to match it, i.e. we shall have a "hyper" wage inflation to match the "hyper" interest inflation which is afflicting us.

It matters greatly, however, how the growth of MIP is reined in. If the Reagan administration and Congress succeed with plans to cut government borrowing just as the private sector is exhausting its credit, we will "succeed" in reining in MIP, but at the cost of a debt repudiation crisis on the scale of 1931-33 and deep depression.

Hixson's Helix--The True Inflation Spiral

As William F. Hixson fully documents in "Some Aspects of Interest and Reaganomics," the U. S. economy only prospers in years in which Private Deficit Spending (PDS) exceeds interest payment on existing private debts, or Private Debt Interest (PDI) by some 40 to 60 per cent. In years in which PDI exceeded PDS a recession occurred. He also demonstrates that the private sector has found it increasingly difficult to increase its debts faster than its interest burden increases, "despite the herculean efforts of the federal government to facilitate the process by loan-guarantees, interest rate subsidies, tax cuts, panic orders for poorly planned military hardware, import-export subsidies, and expansion of the money supply at such a rate as to permit private debt to increase more from 1973 to 1980 than from 1789 to 1973."

FIGURE 3
HIXSON'S HELIX - THE TRUE INFLATION SPIRAL



In a growing economy it is only natural that total indebtedness will increase as well. If debt increased no more rapidly than income, and the rate of interest were constant the "rentier" share would remain constant and the situation would be one of long run sustainability. Furthermore, if nominal income grew no more rapidly than real income, the situation would be one of over all price level stability, though, of course, sub-aggregates might grow at divergent, but balancing, rates.

No such sustainable rate has been achieved in the case of U. S. private debt and debt interest payments. Both PDS and PDI have increased more rapidly than GNP secularly, while over the business cycle PDS has grown faster than PDI in all but recession years. Figure 3, Hixson's Helix, traces the explosive girations of TDI and TDS as percentages of GNP from 1967 though mid 1982. The 45° line represent all possible points at which Total Debt Interest (TDI) is just equal to Total Deficit Spending (TDS), as percentages of GNP. Of the years surveyed, only 1970, 1980, 1981 and (probably) 1982 were "below the line" and thus years in which new borrowing was less than interest payments. These were also, and not coincidentally, years of recession and much economic "discomfort."

The over all visual impression of Figure 3 is of increasingly violent financial fluctuations, with each "peak" year of the business cycle--1968, 1973 and 1978-increasing Total Deficit Spending greatly as a percentage of GNP to an all time--so far at least- high in 1978 when some 22.2% of GNP was deficit financed. However, these vertical departures from the 45° line do not return to the same point with downturns for Total Debt Interest is likewise increasing secularly as a percentage of GNP. Thus the upward spiral. No one can say just where the upper limit is to the percentage of GNP which can be borrowed and spent, or how much of our incomes we can devote to repayment of interest. But such a limit must exist somewhere. It is hard to believe that the economy could operate with, say, half of total spending being deficit financed, or with debtors paying half of GNP to creditors as interest. Yet as Hixson shows, if Post WW II trends continue we shall reach such a state of affairs by 1990.

Figure 3 also indicates that something unusual happened in 1981 in that, following the 1980 recession the economy did not resume a high deficit spending recovery path, but instead appears deflected on a depression path with the TDI/GNP ratio increasing greatly from both the rapid growth of the numerator and slowed growth of the denominator.

Hotson's Discomfort Index

Some indication of the increasingly unsatisfactory performance of the U. S. economy over the 1967-1982 period of Figure 3 is provided by "Hotson's Discomfort Index"--the sum of the rate of increase of the Consumer Price Index ($\dot{P}$), the percentage unemployed (U), the average rate of interest on all public and private debts (i) minus the rate of increase of real GNP ($\dot{Y}$). This summary figure is given in Figure 3 in the circle for each year 1967 to 1981. Table 2 provides the indices together with the index for the growth of the money supply ($\dot{M}_1$).

Table 2. Hotson's Discomfort Index: $\dot{P} + U + i - \dot{Y} = D$

Year	$\dot{P}$ +	U +	i −	$\dot{Y}$ =	D	$\dot{M}_1$
1967	2.9	3.8	6.0	2.7	10.0	6.6
1968	4.2	3.6	6.2	4.6	9.4	7.7
1969	5.4	3.5	6.6	2.8	12.7	3.2
1970	5.9	4.9	7.0	-.2	18.0	5.3
1971	4.3	5.9	6.9	3.4	13.5	6.5
1972	3.3	5.6	6.8	5.7	10.0	9.3
1973	6.2	4.9	7.5	5.8	12.8	5.5
1974	11.0	5.6	8.3	-.6	25.5	4.4
1975	9.1	8.5	8.0	-1.1	26.7	5.0
1976	5.8	7.7	8.2	5.4	16.3	6.6
1977	6.5	7.1	8.8	5.5	16.9	8.1
1978	7.7	6.1	8.8	4.8	17.8	8.3
1979	11.3	5.8	9.8	3.2	23.7	7.2
1980	13.5	7.1	10.3	-.2	31.1	6.4
1981	10.4	7.6	11.4	1.9	27.5	6.3

Source: Economic Report of the President, February 1982, pp. 239, 266, 295, 303. i calculated from FRS, Flow Of Funds, 1982; TDI/TD = i.

Several significant patterns emerge from Table 2 and Figure 3. One is the cyclical and secular tendencies of our "apples plus oranges minus grapes" discomfort index. Upswings considerably decrease the degree of discomfort, however, the secular tendency has been for discomfort to rise. Moreover, this increasing tendency to malfunction is to be seen in all the component series: in accelerating inflation, increased unemployment, rising interest rates and retarded growth of real output.

A second pattern is that the rate of inflation is slower during upswings, (1967-8, 1970-3, 1975-8) than during downswings (1969, 1974, 1979-80). This suggests that strong action in 1982-3 to "restart" the economy would be twice blessed in that inflation would continue to moderate, especially if the upswing were accompanied by direct controls, such as Nixon's in the 1971-2 period.

A third is the relationship between the M_1 and i variables and the overall performance of the system. Clearly the "Fed" decelerated the growth of M_1 and raised i in 1969, then accelerated M_1 and reduced i in the 1970-2 period, pursued a "tight money" course in 1973-5 despite the recession, stepped up the growth of M_1 in 1975-8 while interest rates rose, rather than fell as in previous, less inflationary, upswinns. Since 1978 the rate of increase of M_1 has fallen to almost one-half the rate of increase in P, with consequent steep increases in i and fall in $\dot{Y}$. That money has been very tight throughout the 1967-81 period may be seen from the fact that while GNP rose 2.65 fold from 1967 to 1981, M_1 increased only 1.39 fold or little more than one half as much.

The economy has, until now, succeeded in expanding real as well as merely nominal income despite a tight money policy, by"layering" ever more rapidly expanding debts on a slowly expanding "official money supply." The private sector has been overwhelmingly the deficit financier, engaging in roughly 80% of debt creation. However, the private sector has increasingly "run out of steam" over the 1967-81 period as Table 3 makes evident. Table 3 presents Government Sector (i.e.Federal, State and Local) Deficit Spending (GDS) as a percentage of Total Deficit Spending (TDS). The pattern is clearly countercyclical, with government borrowing "filling in the troughs" during recession years when private borrowing falters,then shrinking relatively and absolutely in more prosperous years.

Table 3 Government Sector Deficit Spending (GDS) as a Percentage of Total Deficit Spending (TDS)

Year	GDS/TDS
1967	21.7
1968	20.2
1969	12.0
1970	28.0
1971	28.5
1972	17.0
1973	15.7
1974	29.4
1975	48.5
1976	31.3
1977	24.6
1978	22.2
1979	20.0
1980	32.1
1981	34.4

Source: FRS, Flow of Funds Accounts

The most significant year surveyed in Table 3 is 1975 when GDS more than doubled from its 1974 level of $48.4 billion to $111.0 billion and set the economy onto an upswing, by supplying almost half of the economy's deficit finance that year. Any idea that the U. S. economy will recover from its present deep downturn without similarly Herculean effort of expansionary fiscal and monetary policy is wholly erroneous. Those who insist that now is the time to at least make gestures toward balancing the budget could not be more wrong. Have we forgot everything Keynes taught us? Are we determined to relive the 1930s and wait for some latter day Hitler to give us an excuse to raise GDS?

However, we must to more than set the economy up for just one more, yet wilder, ride on "Hixson's Helix." We cannot continue indefinitely, or indeed for more than a very few years, increasing deficit spending and interest repayment as a percentage of GNP. We must find policies which will keep TDI some constant percentage, and TDS some constant, and higher percentage of GNP. Furthermore, we must find policies to bring down the growth of nominal GNP to that of sustainable real GNP so that inflation can end.

Pasinetti's Theory of the "Natural" and "Market" Rate of Interest

To replace the "dis-integrated" concepts of the prevailing interest rate theories, Luigi Pasinetti has recently proposed his theory of the "natural" versus the "market" rate of interest.[4] In the, admittedly abstract, or "model" world of a pure labor economy, he demonstrates that the only sustainable interest rate is the rate of growth of the productivity of labor. If the market rate of interest exceeds the natural rate the share of the rentier will grow and the share of labor (and by extension, the entrepreneur) will shrink. If, on the other hand, the market rate falls below the natural rate the "euthenasia of the rentier" once advocated by Keynes,[5] ensues.

Extending Pasinetti's abstract argument to a world of money and prices we can readily see why Keynes, unlike his "Keynesian" disciples, put such great great emphasis on the need to drive down the rate of interest if we are to avoid cyclical instability and secular stagnation.[6] The "natural" rate of interest in the economy is the rate of growth in "total factor productivity", i.e. real output per head. This is quite low in even highly progressive economies like our own, where it has averaged between 2 per cent and 3.5 per cent. In recent years productivity gains have been driven down to near zero by the slowing of investment and the obsolescence of much of our energy inefficient capital stock. During the World War II boom through the mid 1950s we enjoyed nominal rates of interest which approximated that of real output per head. Indeed, when correction is made for the "creeping inflation" of that era, the "real" rate of interest was negative during much of these years of rapid real growth.

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[4] Luigi Pasinetti, "The Rate of Interest and the Distribution of Income in a Pure Labor Economy," Journal of Post Keynesian Economics, Winter 1980-81, III-2, pp. 170-82. For an extension of his argument see his, Structural Change and Economic Growth (Cambridge University Press, Cambridge, 1981)

[5] John Maynard Keynes, The General Theory of Employment, Interest and Money, (Harcourt, New York, 1936) p.376.

[6] See The General Theory, pp. 241, 340-3, 350-2, 374-8

Increasingly, however, from the late 1950s the "Fed" has jacked up the market rate of interest far above this natural rate, promising endlessly that so doing will end inflation. Naturally, it has done nothing of the sort. As business firms have sought to prevent the fall in the profit share occasioned by "unnatural" interest rates they have raised their prices. As wage and salary recipients have been hit with increasingly "unnatural" interest rates they have demanded higher pay to pay the higher interest rates and the higher prices they helped cause. As we saw above, however, business, especially small business, was not successful in maintaining the profit share. The result has been "stagflation" rather than simply inflation, a fall of the stock market in real-price level corrected terms,equaling the great crash from 1929 to 33, and secular stagnation.

High interest rates cause cumulative inflation--financed by layering more and more debt claims per dollar of money supply, and pressing more and more debt claims into service as "money." Ultimately such a "fragile" financial system, to use Hyman Minsky's useful phrase[7] must become top heavy and crash. Then after a period of bankruptcy, scaling down of debts and interest rates, and general depression the whole dreary business will start all over again. In the"good old days" of unmanaged capitalism, the whole cycle took only 8 to 12 years. However, the downturn of the Great Depression era was so severe and so protracted that we swore "never again" and the era of "Keynesianism", or managed capitalism ensued. "Keynesianism" was such an improvement on laissez faire that we have managed to have a 40 year boom, the longest and best sustained in the history of capitalism. However, increasingly in recent years the difficulties we have surveyed above have compounded. These difficulties have been harder to face and resolve because the very successes of the "Keynesian" era in maintaining growth and near full employment led to the revival of the ancient"classical" error that such happy outcomes were "automatic" if only the government would intervene less.

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[7] See Hyman Minsky, "The Financial Instability Hypothesis: An Interpretation of Keynes and an Alternative to 'Standard' Theory," Nebraska Journal of Economics and Business, reprinted in Challenge, March-April 1977, pp. 20-7. For a fuller statement of Minsky's views se his, John Maynard Keynes, (Columbia University Press, New York, 1975).

If we are to obtain a sustainable economy we must adopt the new wisdom of Pasinetti and old wisdom of Keynes. Indeed, we need a return to the ancient wisdom of our society, long scorned by the "worldly philosophers" of modern economics. I refer to the prohibition of interest taking in all the books of ancient wisdom of our society -- The Bible, the Greek philosophers, The Koran, and the fathers of the Catholic Church. All held that there is no quicker road to social or individual hell than allowing"usurous", or indeed, any interest rate. For in a world of zero productivity gains, a world where for hundreds of years the standard of living does not rise, the "natural" rate of interest is claerly also zero--thus their view and Pasinetti's converge. Clearly to, in such a world, the result of allowing any positive market rate of interest is inevitable--a society of a few wealthy money lending landlords with everyone else their tenants, servants and slaves. Such a result was the downfall of the Graeco-Roman civilization. To avoid this result ancient Israel had the Year of Jubilee -- every 50th year all debts were cancelled, all slaves set free, and all land returned to its original owners. (See Leviticus 25: 9-14).

The Way Out

The pressing needs of the hour are means to reverse the growth of the various interest income categories as a percentage of GNP without setting off either a "hyper-inflationary" boom or a debt repudiation crisis and collapse. To this end I propose a combination of tax and interest rate cuts combined with credit and incomes controls to channel expenditure into real investment rather than consumption and price hikes. In addition, changes in the tax laws to favor equity finance over debt finance, and to tax consumption financed by debt rather than to subsidize it, should be enacted.

As a means to the end of low interest rates, some variant of William Krehm's "tax-bond" proposal should be enacted. The basic idea of the "tax-bond" can be seen in Keynes' "How to Pay for the War." The tax-bond is a form of government finance midway between the compulsory tax and the purely voluntary subscription to a government bond. The lower the rate of interest on the tax-bond, and the more remote its redemption date, the more the tax element of the tax-bond, and the more compulsion must be used to sell them. To the same extent, the more the tax element the more their effect in reducing the interest paid on the public debt and the greater the downward effect they have on ordinary bond interest rates as the financial system increasingly loses its role as holder of the public debt. Thus households and businesses receiving President Reagan's tax cuts might be required to take the cuts in the form of say, 2 per cent bonds maturing in three years, when hopefully the "Laffer curve" will have had time to do its stuff. Those wishing to obtain a further tax cut could do so by subscribing to further tax-bonds, buying $1 plux x of tax-bonds paying y rate of interest and maturing in year z. By varying x, y and z the government could make the tax-bonds sufficiently attractive to sell any desired about at interest rates far below the current "unnatural" market rate.

The tax-bond could also be incorporated into further investment expanding, anti-inflationary programs. For example, corporations which stepped up their investment in new capacity could be allowed the valuable privilege of buying tax-bonds instead of paying part, or all, of their profits tax. A new incentive to noninflationary wage-price behavior could be added to the "carrots" and "sticks" proposed by Weintraub, Wallich and Okun for their various tax based incomes policies. Corporations and unionists which made noninflationary wage-price settlements would be allowed to buy tax-bonds instead of being taxes, while those who persisted in inflationary behavior would have to pay penalty tax rates.

To reinforce the effect of tax-bonds in driving down interest rates, I further urge that the Federal Reserve System lower its discount rate to 1 or 2 percent while committing itself to add no more than, say, 5 percent to the monetary base. This move would greatly lower the cost of borrowed reserves to the banking system and put them under heavy pressure to lower their prime rate drastically rather than marginally. As always, the "Fed" would ration the amount banks could borrow at this very attractive rate, while the banks, in turn would be required to channel new loans into productive, rather than consumptive, speculative and merger loans.

What will be required ultimately is a return to usury laws to hold market rates down to rates the economy can afford to pay without setting off cumulative booms and busts. We should abolish interest on NOW accounts and reduce interest on savings accounts to 3%. People who want a higher return than that should take their chances on the stock market, instead of being offered an assured return on a riskless investment.

It would be best to achieve these dramatically lower rates by close international coordination -- to prevent hot money flows and consequent exchange rate instabilities. However, in the absence of such agreement the U. S. should go it alone as it will be quickly copied here, as it has been in the disastrous high interest policy.

For more on William Krehm's rationale for the tax-bond proposal see his, "Tax-Bonding: An Economic Systems Approach, submitted to the J. E. C.,as well his earlier publications.[8]

Having destroyed the bond market with its tight money, high interest rate policy, and the uncertainly and lack of faith in the future the failure of this policy has engendered, the "Fed" should now restore this market by offering to finance vital "sun-rise" industries with low interest, long term loans. This is what the Bank of Japan has been doing for the Japanese computer and robotics firms, while we have diverted IBM from the investments upon which its future, and ours, depend to lending its profits in the money market.

For further proposals looking toward a non inflationary recovery I refer to my,"Policies to End Stagflation: A Radical Proposal or 'ABC on D Day Plan,'" At the time I wrote this paper the inflationary half of stagflation seemed the more pressing problem than the stagnation half. In the present situation I would not advocate an actual rollback of wages and prices--a one year freeze should be quite sufficient together with the other policies there advocated.

For a preliminary econometric test of the tax-bond in a Canadian setting see James A. Brox and Wlater Reger's, "A Simulation Study of Tax-Bond Financing."

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[8] William Krehm, Price in a Mixed Economy: Our Record of Disaster (Thornwood, Toronto, 1975); Babel's Tower-The Dynamics of Economic Breakdown, (Thornwood, Toronto, 1977); How to Make Money In a Mismanaged Economy,(Thornwood, Toronto, 1980).

The perils through which our economy is now passing are also a great opportunity -- an opportunity to think anew, create anew, and with strong leadership expressive of a new political will, set the world economy up for another 40 good years.

CAN CAPITALISM SURVIVE ITS ECONOMISTS?

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In the rock opera, "Jesus Christ Superstar", Webber and Rice have Jesus sing, "The end is just a little harder when brought about by a friend." There is also an old prayer, "God protect me from my friends. I can handle my enemies myself." It is my contention that both of these poignant lines apply to the present plight of the capitalist system. It is in peril of being destroyed and swept into the dust bin of history, not by the machinations of its avowed enemies, but by the tragically misconceived policies prescribed by its most fervent friends -- its doctors of economics.

Who can doubt that President Reagan and his supply side advisors at the White House, Chairman Volcker and his aids at the "Fed", and their counterparts in Britain, Canada and other lands all ardently desire to end the stagflationary disease and restore capitalism to health? Like medical doctors with a patient ill with a baffling illness they have prescribed the best medicines they can think of, or find in their medical books, and yet the patient has got sicker and sicker. They have dosed the patient with tax cuts, spending cuts, regulatory reform, tight money and high interest rates and yet his inflationary fever persists and his energy level has noticeably decreased. All the vital signs are down: employment, output, balance of payments, growth, investment.

What to do? Should Dr. Heller, who used to treat the patient in the healthier 1960s be called back to apply his prescriptions of higher taxes and lower interest rates? Should Dr. Weintraub be called in to TIP the patient toward health with his Tax-Based Incomes Policy? Or should we wait a while longer to see whether there is "light at the end of the tunnel", whether indeed, "prosperity is just around the corner."? A still more disturbing question presents itself increasingly of late: Could it be that some of the medicines so hopefully prescribed by our learned doctors are useless or even counterproductive, and if so, which ones?

But let us take the medical analogy a step further. Until about the middle of the 19th century it was considered good medical practice to bleed patients for many ailments -- fevers, epilepsy, pneumonia, gout, insanity, headaches and many more. Phlebotomy, or blood letting, was carried out by a variety of methods -- scarification, cupping, venesection, and leeches, and the medical student had much to learn concerning which vein or artery to open for which disease and how much blood to withdraw, and how rapidly, to effect a cure. So important was venesection to medical practice that the leading British medical journal is still titled The Lancet and so common was the application of the medical leech that medical men themselves became known as leeches, not because of the size of their bills, but because of their method of treating most ailments.

Why did doctors bleed their patients and why don't they do it anymore? The custom of bleeding to cure diseases goes far back into prehistory and the theory still taught into the 19th century goes back to the early Greeks. Hippocrates and Alcmaeon, and later the Roman Galen taught that disease was caused by a disequilibrium between the four body "humors" the sanguine, phegmatic, choleric and melancholic. The sanguine patient had too much blood (which came from the liver); a phlegmatic person had too much phlegm (which came from the brain, stomach and lungs); the choleric had too much yellow bile (from the gall bladder) while the melancholic was long on black bile (from the spleen). The purpose of the doctor's lances and leeches, purges, emetics, and hot or cold baths was to restore equilibrium, and thus health. The four humors were supposed to correspond to the four "natural elements" of fire, air, water and earth and having decided whether the patient's symptoms were of an excess of heat, dryness, wetness or cold the doctor went to work to remove the imbalance. As E.S. Turner puts it, in accordance with this ingenious theory, "For 2,000 years stupendous quantities of rubbish, some of it lethal and much of it obscene, were shovelled into the human maw, and rivers of blood were drained away ..." (E.S. Turner, Call The Doctor, A Social History of Medical Men, New York, St. Martin's Press, 1959, p. 21.)

There is an easy parallel between the four elements of early science and the four "factors of production" in economics: entrepreneurship = air, labor = fire,capital = water and land is, of course, earth. Furthermore, the economist's vision of the "general equilibrium" obtaining between supply and demand in all markets, so that prices and quantities reflect optimum economic health, is close to Hippocrates' dictum that "The human body is a circle, of which each part may be esteemed as both the beginning and the end ... By the affection of one part, the whole body may become affected ..." (as cited by Gerhard Venzmer, Five Thousand Years of Medicine, London, Macdonalds, 1968, p. 75.) In accordance with the economist's theory and the insight that an inflationary boom was like a fever, or sanguine condition, the world's statesmen and central bankers have sought to cure inflation by draining some of the economy's life blood by higher taxes (the lance) or higher interest rates (the leech). Similarly they have attempted transfusions of new money, tax cuts and government expenditure boosts in depressed times, while perhaps trying to reduce the black bile prevalent in such melancholic times with social reforms. Medical doctors have now abandoned lancing and leaching, and much of the lethal, obscene rubbish they once prescribed, and are, therefore, now much less of a menace to their patients than they once were. Has there been similar progress in economics, or are we still in the dark ages of economic theory and practice?

It is of interest that the practice of applying leeches to cure the sick did not go out with a whimper, but with a bang, its greatest vogue coming in the first third of the 19th century. This vogue was the result of the persuasive powers of one Frenchman, Francois Joseph Victor Broussais, and the rapid subsequent demise of leeching owes much to another Frenchman, Pierre Charles Alexandre Louis. Broussais was an ex soldier and military doctor who taught that there were no such things as different individual diseases. There was only one disease, inflamation of the gastro-intestinal canal, and only one sensible cure, leeches. As Venzmer tells it,

> "Broussais, who had at his disposal great powers of persuasion, won many adherents for his peculiar system. As a result, the demand for leeches became prodigious: in 1827 thirty-three million leeches were imported into France; in 1833 the number was forty-three million. Fortunately, an opponent to Broussais was soon to appear in the person of Pierre Charles Alexandre Louis, born in 1787, who introduced the science of statistics into medicine. By means of these he easily proved that Broussais' universal remedies of bleeding and applying leeches were not only useless for many diseases but often even harmful." (Venzmer, *Five Thousand Years of Medicine*, p. 240.)

Broussais and his "one disease-one cure" theory reminds one of Milton Friedman and his "monetarist" view that everything wrong with the economy can be cured by wise monetary policy, and of the story of the student who dozed in one of Friedman's, by all accounts, stimulating lectures. Friedman, perhaps noticing the inattention of the student, directed a question to him. The startled student answered, "Sir, I didn't catch the question, but I know the answer is, 'Reduce the money supply.'" It is a good story and it also illustrates what teachers are up against, for Friedman has never in his life advocated reducing the money supply. Friedman attributes the Great Depression of the 1930s solely to the reduction of the money supply from 1929 to 1933. What Friedman does advocate is slowing the growth of the money supply to a steady 2 to 5 percent per annum and he does maintain that if this were done, most, or all, of the macroeconomic ills the capitalist flesh is heir to would soon clear up so that the economy would be up and about in no time walking about without Keynes. Even this simple doctrine appears to tax the mental abilities of his inattentive students, who, when they graduate and become central bankers, do attempt to cure stubborn stagflation with the "shock therapy" of zero or negative money supply growth, and then when this policy leads to a depressionary tailspin, give a quick transfusion of easy money, much to Friedman's disgust. Perhaps Broussais had similar troubles with somnolent medical students graduating with the impression that if one leech a day didn't cure that twenty leeches a day would. Be that as it may, Broussais' excessive claims for leeching succeeded in discrediting this ancient error once and for all, and it is to be hoped that Milton Friedman's excessive claims for the likewise ancient "quantity theory of money" and the "classical dichotomy" will similarly lead economists to abandon these errors. But if Milton Friedman is the Francois Broussais of economics, who is our Pierre Louis? Until a greater talent takes up the cause, we shall do our best.

As all students of economics are taught, the "Quantity Theory" states that it is the relationship between the supply of money and the total output of the economy which is central to accounting for the level of prices. In simplest form the quantity theory is reduced to the statement, "Double the money supply and the price level will double with all real quantities (output, employment levels and real wages) unchanged." Friedman asserts that this simple version is true in the "long run", but also maintains that in the "short run" changes in the money supply also affect output and employment. The "classical dichotomy" is a logical corollary of the "quantity theory" and consists of the proposition that economists' microeconomic theories of particular prices, and relative prices, have nothing to do with the macroeconomic theory of the absolute price level.

Not all economists subscribe to the quantity theory and the classical dichotomy. Notably the great British economist Lord Keynes renounced these doctrines and sought to build his theory of the price level on the "homey but intelligible concepts" of microeconomics. Unfortunately only a minority even of his disciples followed him in this -- the dozing student syndrome again -- so that most "Keynesian" economists have been as blind to the perverse effects of their "anti-inflationary" doctoring as the most purblind monetarist. The economist's blind spot, Achilles heel, and schizophrenia consists of his self-contradictory theories of interest and taxes. In his microeconomic analysis of the "theory of the firm" the economist shows clearly that interest and taxes are costs and that when they go up firms must raise their prices, whatever the loss in sales. When they turn to the macroeconomic "theory of the price level" they hold the direct opposite and teach that raising interest and tax rates will reduce the price level by reducing demand. But how are, otherwise intelligent, economists able to maintain such discordant ideas in mental equilibrium?

Figure 1 is the standard diagram economists use to illucidate the "theory of the firm" and by extending the argument slightly it can illustrate the economist's defense of the "classical dichotomy." The extension consists of pointing out how much the short run cost curves of the firm resemble the hull of a boat. Now boats float on water and if we identify the water with the money supply the defense is complete. Figure 2 shows our cost curves

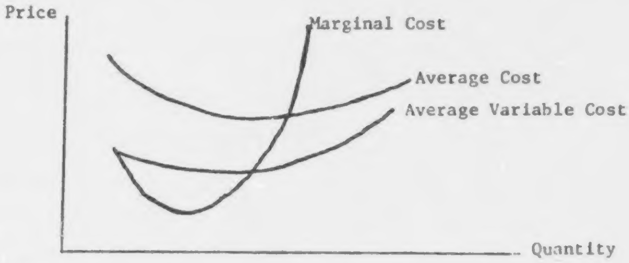


Figure 1: The short run cost curves of the firm

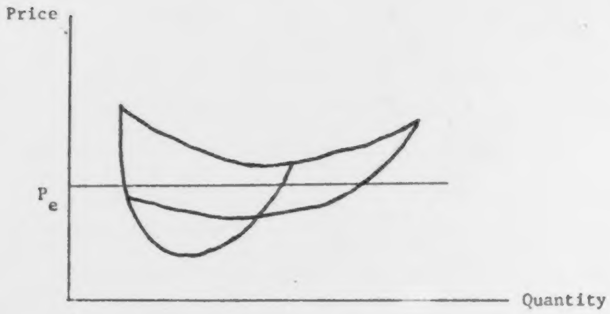


Figure 2: Cost curves as a boat floating on the money supply

transformed into a boat by filling in the bow and stern, afloat on the equilibrium price level, or what is the same according to the quantity theory, the money supply. Let us now visualize all the business firms of the world as ships afloat in a large body of water. Will changes in the ships' displacement as new ships are added, old ships sink, or ships rise and fall in the water as their costs change, alter the level of the water, i.e. the price level? The answer is clearly, "very little" in the case of a lake with no outlet and "not at all" if the body of water has a considerable connection with the sea. Suppose further that all these boats are in a lake whose level is controlled by lock keepers, i.e. central bankers, and our analogy is complete. Therefore, if money -- or "liquidity" is like water, and firms are small relative to the amount of water-money, it must follow as the night the day that doubling the money supply will roughly double the price level and the fact that lower interest rates might accompany the rise in the money supply (a cost reducing factor) will be totally swamped by the upward movement and vice versa for a tight money, high interest regime. Before we leave our lake or yacht basin, let us use it to illustrate two of the economist's favorate points.

1. The perniciousness of price controls. Picture a boat tightly anchored in a bay subject to strong tides. What may happen to the boat? Answer, if the tide rises too high the boat will sink, like a regulated industry such as apartment rentals during a general inflation.

2. On the relative unimportance of the degree of monopoly in determining the price level. In terms of our boats, a "purely competitive" firm has little or no "sails" ability and its owners will be lucky if they can charge a price much above its average cost at the minimum where the deck is intersected from below by the marginal cost "keel". However, the firm with a high degree of monopoly power is "rigged" for its market like a fast sloop or Arab douw with its latteen sail. Here AR = Average Revenue or Price and MR = Marginal Revenue and profits are maximized by producing where MR = MC.

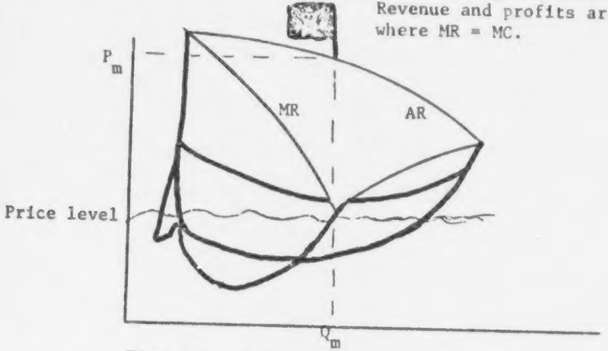


Figure 3: A Monopoly firm rigging its market by restricting output to Q_m while raising price to P_m

This discussion can be much extended, as by getting into Schumpeter's discussion of the virtues of innovative monopolies or by picturing the multiproduct firm as, say, a three masted schooner, but this is beyond our present purposes.

However, seductive as is the boats-water analogy, is it really a good picture for the relationship between business firms and the money supply? A moment's reflection upon the actual size of the money supply (whether measured as M_1, M_2 or M_x) relatively to GNP, or the capital stock and surplus of all business firms, will indicate that it is not a good analogy. The money supply is considerably smaller than the "boats" that are supposed to float in it. Thus an analogy of a person climbing into the bathtub is much closer. Clearly, with a given amount of water in the tub, the size of the person - or persons - climbing into the tub has a lot to do with how high the water will rise. Furthermore, people taking a bath do not take the amount of water in the tub as "exogenously given", nor do business firms take the amount of money and credit in the system as something they are powerless to affect. It is interesting that the money supply is now much smaller relatively to GNP than it was in 1950 yet the price level now is more than 3 times higher. Thus M_1 (currency plus demand deposits) was 41% of U.S. GNP in 1950, but only 13% of GNP in 1981. In 1950 M_2 (M_1 + time deposits) was 80% of GNP but only 63% of GNP in 1981. Thus, whether we picture the monetary policy pursued from 1950 to 1980 as lancing, leeching, opening the lock gate, turning off the water, or pulling the plug, the result has been a higher price level rather than an end to inflation.

So let us turn from misleading analogies to a few statistics, since it was statistics which led to the end of the use of medical leeches. Although economists have a keen interest in quite a number of macroeconomic series; GNP and its components, the money supply, the price index, etc. etc. they display little interest in two series which we maintain must now come center stage: Total Debt and Total Debt Interest. It is what has happened to Total Debt and Total Debt Interest while economists were fooling around in the bath tub and pretending they were controlling the tides which threatens the continued existence of capitalism. Yet so little are these vital series known that the typical American economist couldn't find either of them if given three hours to hunt them up in the library, while the typical Canadian economist couldn't find them at all. So little importance is accorded these series that Jimmy Carter stopped printing the U.S. series on Net Debt Public and Private in the Economic Report of the President in 1976, and the Monetary Interest Paid series gets little notice in the Survey of Current Business. The Canadian economist can't find the series because they have never been published in Canada as such, but must be pieced together from the Flow of Funds Accounts, which few understand. Most economists are vaguely aware, as the "man on the street" is not, that private debts as well as public debts exist and are very large, and economists who have troubled to look at the figures know that the total of private debt is several times as large as (and is growing more rapidly than) the public debt which so worries conservatives. The economist can also readily see if he thinks about it, that since debt is increasing rapidly and the rate of interest is also rising, that Total Interest Paid, which is the product of Total Debt times the average rate of interest must be growing very rapidly indeed. But even the few economists who know these facts don't seem to worry about them. We think they should.

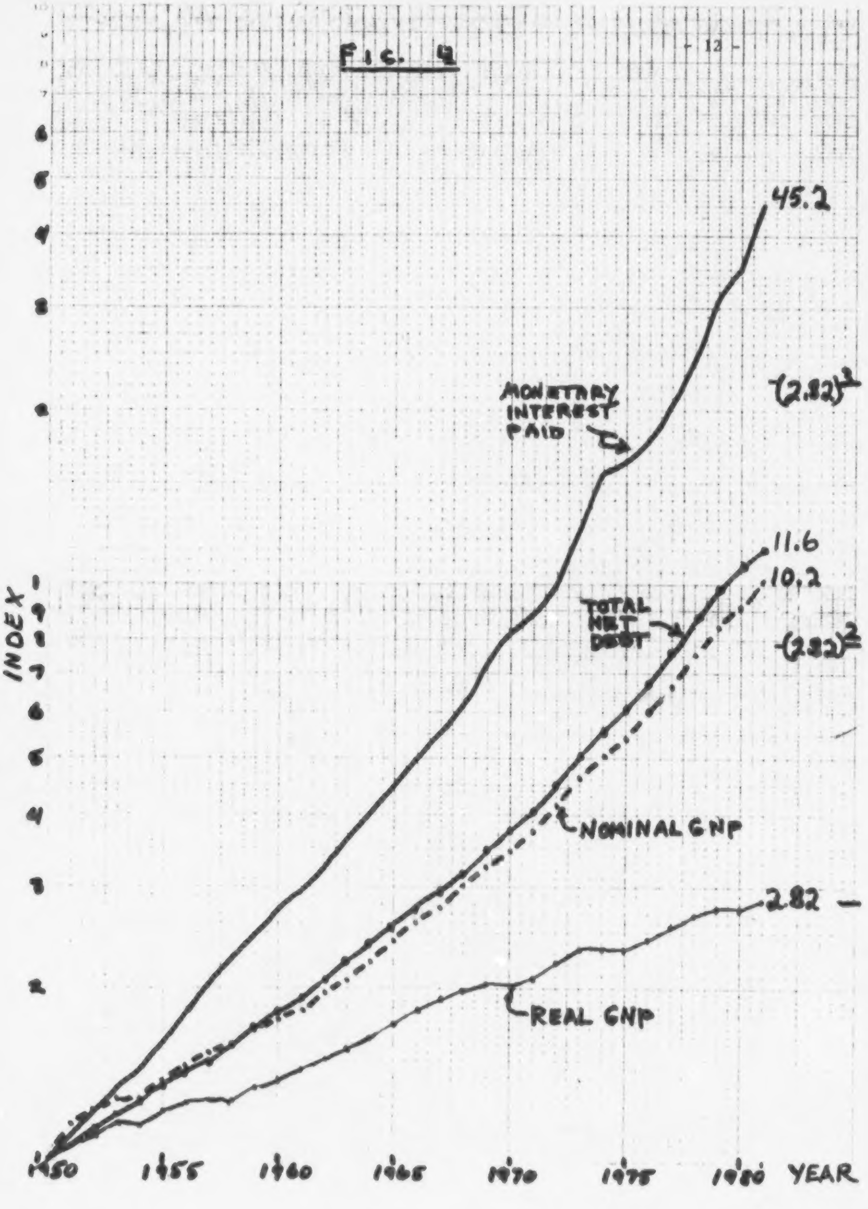
Debt, Interest and the Emerging Financial Crisis

In 1950, the U.S. and much of the "western world" was in the earliest stages of what turned out to be the longest and best sustained boom in the history of capitalism. At the beginning of this boom the rate of inflation was low (1.4% in 1950) as was unemployment (5.3%), growth of real output was high (8.7%). Taxes were low (24% of GNP), money was readily available at low interest rates (the average rate was 3.5%) and only the Federal Government was heavily in debt. (Federal debt = 76% of GNP, state and local debt = 9% of GNP, private debt = 80% of GNP). Things turned progressively sour as the boom wore on and by 1981 the figures were as follows: the rate of inflation was high (9.1%) as was the level of unemployment (7.6%), growth of real output was small (2.0%), taxes had increased to 33% of GNP while the money supply had shrunk relative to GNP and was available only at high interest rates (average 13% with the marginal rate on new loans much higher) and all categories of debtors except the federal government were heavily in debt (Federal Debt = 39% of GNP, state and local debts 12% of GNP, private debt = 141% of GNP).

Figure 4 makes some comparisons between important indicies from 1950 to 1981. Whereas real, or constant dollar, GNP grew about 2.8 times in three decades (from $534.8 to $1,509.6 billion in 1972 dollars) nominal, or current dollar GNP grew almost 10.2 times (from $286.5 to $2,922.2 billion) as the price level more than tripled. Moreover, Total Net Debt increased 11.9 times, (from $472.9 billion to $5,610 billion (est.)) thus at a faster pace than GNP, so that debt burdens increased. However, the most important fact conveyed by the figure is that Monetary Interest Paid increased far faster than debt or income, growing 45.2 times (from $16.6 billion to $750 billion) from 1950 to 1981, as the average rate of interest rose from 3.5 percent to over 13 percent. Thus nominal GNP grew by more than the square of real GNP, while interest paid grew by more than the cube of real GNP. Another way of putting the same facts is to say that interest paid grew more than 16 times as rapidly than did real output. Who would argue that we should attempt to stop inflation by increasing wages, or profits, 16 times as rapidly as real output is growing? And yet, so confused is present day economic theory that it is argued by not only sane, but reputedly wise men, that raising interest rates controls, rather than contributes to, inflation.

It cannot be too strongly stressed that the disproportionate growth of interest that we have seen for the past three decades is not sustainable; for if it were sustained we would in a few years find Monetary Interest Paid greater than GNP -- an impossible situation. Already Monetary Interest Paid (MIP)

FIG. 4


MONETARY INTEREST PAID
45.2
(2.82)^2
TOTAL NET DEBT
11.6
10.2
(2.82)^2
NOMINAL GNP
2.82
REAL GNP
INDEX
1
2
3
4
5
6
7
8
9
1
2
3
4
5
6
7
8
9
1950
1955
1960
1965
1970
1975
1980
YEAR

has grown from 5 percent of GNP in 1950 to 26 percent of GNP in 1981. Indeed MIP is today as large as GNP in 1966. It matters greatly how this disproportionate growth of interest paid comes to an end. It may end in a debt repudiation crisis as farmers, homeowners, small businessmen, and even great corporations declare bankruptcy. It may first lead to hyperinflation as nominal GNP rises toward the pace of interest paid before an even more terrible crash. It can be ended by wise government policy to steer us away from shipwreck.

However, the time left for maneuver is very short. Consider a few figures. Over the period from 1950 to 1981, while nominal GNP rose 10.2 times Employee Compensation grew 11.4 times (from $154.8 billion to $1,771.7 billion) so that wages and salaries grew from 54% to 61% of GNP. Thus Employee Compensation (W) grew far too rapidly for price stability and wage "push" is an extremely important component of our inflation. Inflation will never end unless and until wage and salary gains approximate the growth of real GNP. But, as Figure 4 indicates, MIP is growing at a far faster rate than W. Thus MIP was only 10% of W in 1950, but 42% of W in 1981. Indeed, should both series continue to grow in the future as they have in the recent past (1980-1) shall obtain the following increasingly impossible results.

Table 1: Projection of 1981 Growth Rates of: 1. Monetary Interest Paid (ΔMIP) 2. Employee Compensation (ΔW) 3. ΔMIP/ΔW Ratio and Resulting 4. Monetary Interest Paid (MIP) 5. Employee Compensation (W) 6. MIP/W Ratio.

Year	1. Δ MIP	2. ΔW	3. Δ MIP/Δ W	4. MIP	5. W	6. MIP/W
1981	$ 162	$175.2	.92	$ 750	$1,771.7	.42
1982	206.6	194.4	1.06	956.6	1,966.1	.49
1983	263.6	215.8	1.22	1,220.2	2,181.9	.56
1984	336.2	239.4	1.40	1,556.4	2,421.3	.64
1985	429.8	265.7	1.62	1,986.2	2,687.0	.74
1986	545.9	294.9	1.85	2,532.1	2,981,9	.85
1987	697.6	327.3	2.13	3,229.7	3,309.2	.98
1988	889.8	363.1	2.45	4,119.5	3,672.3	1.12
1989	1,135.0	403.0	2.82	5,254.5	4,075.3	1.29
1990	1,447.7	447.2	3.24	6,702.2	4,522.5	1.48

In 1981, as the result of the high interest policy Monetary Interest Paid was 27.6% greater than in 1980, while Employee Compensation grew 11% in the same year. As Table 1 indicates, should these growth rates continue for both series, the increase in interest paid (ΔMIP) will exceed the increase in wages paid (ΔW) in 1982; thus "interest push" will soon exceed "wage push" as an increment to cost, and by 1988 Monetary Interest Paid will exceed Employee Compensation! We should by that year by paying -- or rather, trying to pay, $4.119.5 billion in interest -- not much less than the total debt burden in 1979! The result is impossible and so it will not happen. However, what will happen instead if we continue present policies will be bad enough, perhaps bad enough to end capitalism as we know it.

At the time of writing, early 1982, high interest rates have so discouraged borrowing that the weak recovery from the 1980 slump is over and the economy has plunged into recession. If the current recession is deep enough this will slow wage increases and interest rates will dip even without an easy money policy as many bankruptcies occur. If the present recession is allowed to become a full scale depression in an excess of "bloodletting" zeal, there will be great losses to creditors from bankruptcies, credit moratoria, and a general writing down of claims. In all probability there will also be wholesale debt repudiation internationally with consequent failure of the international banking system. What we are describing has all happened before -- notably in the Great Depression of the 1930's. After several years of debt liquidation and sufficiently low interest rates the stage might be set for an "automatic" capitalist recovery -- should capitalism survive anywhere on earth.

In an effort to avoid the "great crash" or "shipwreck solution" to our difficulties, the monetary authorities will almost certainly, however, reverse course once signs of serious depression become unmistakable and flood the credit markets with new money via massive purchases of government, or even, private debts. This bailout will keep the ship afloat, but set the stage for even more rapid inflation in the recovery phase, and a yet more violent collapse as interest payable forges ahead of new borrowing. All this has also happened before, as Figure 4 makes evident. Each of the recessions since 1950, evident as dips in the real GNP index -- those of 1953-4, 1957-8, 1969-70, 1973-4; were preceeded by rapid increases in Monetary Interest Paid, as both borrowing and rates of interest increased. As the recession worsened, monetary policy became expansionary and interest rates dropped, producing the "saddles" in the Monetary Interest Paid graph in 1954, 1958, 1970-2, 1974-6. (The 1961 "saddle" was the only drop in interest rates in three decades engineered before, or instead of, a recession.) So the more likely short-run prospect is "strato" inflation as wage inflation rises toward the 28% pace of interest inflation, with perhaps some short-run moderation of interest inflation to "only", say, 18%. Something close to this seems to be occurring in Mrs. Thatcher's England. As South America has shown, countries can endure "strato" inflation rather indefinitely provided that they inflate via non interest bearing paper money rather than by high interest rate borrowing. However, they cannot save and invest heavily in the real capital needed for real growth with inflation rates of 150% a year and interest rates of 230% a year, such as afflict Argentina. Nor can countries enduring the social conflicts that accompany rapid inflation preserve democratic governments.

Are there, then, no choices other than depression now, or a bigger depression later after one last bout of "strato" inflation? Yes, there is one, but making it involves abandoning the conventional wisdom and mystification which has led us to this impass. If we are to avoid shipwreck or rapid inflation we must get the rate of increase of Monetary Interest Paid down and keep it down. ΔMIP depends on two elements: the current rate of interest and the current rate of borrowing. Both must be reined in so that ΔMIP takes on the growth rate of nominal GNP, and nominal GNP ultimately takes on the growth rate of real GNP.

Thus the great needs of the hour are means of driving down interest rates and keeping them down, and credit allocation to direct credit to its most productive uses. Even the monetarists, who so hate government intervention, recognize that the private sector cannot be trusted to create the right amount of new money. Thus they advocate that the "money supply" be regulated so that it will only grow as fast as the full employment real output of the economy can grow. What they have failed to recognize is that it is not just that particular debt called money -- roughly currency, coin, and bank deposits -- which must be controlled, but all debt. For the private sector, which has done almost 80% of all deficit finance since World War Two has proved extremely ingenious at expanding debt claims rapidly even though the Federal Reserve System has kept the official money supply growing only slowly. It is not a rapid growth of that debt called money which has financed our inflation -- M_1 (currency, coin, plus demand deposits) is up only 3.1 times since 1950 (from $115.3 to $360.0 billion), or little more than real GNP; M_2 (M_1 plus time deposits) is up 6.4 times (from $288.1 to $1,841.2 billion), but total debt, up 11.6 times, and interest on that debt, up 45.2 times.

What we need ultimately is a return to the interest rates of the depression and World War Two era, with short term rates of 1 to 2 percent and long term rates of 2 to 5 percent. Switzerland had such interest rates during much of the 1970's together with the lowest rate of inflation of any country on earth. As a means of getting to such rates we urge the following policy upon the Reagan administration: finance all current and prospective Federal deficits with tax-bonds paying considerably below present rates of interest. In addition "roll over" existing high interest rate debt into tax-bonds as they mature.

Tax-bonds combine the two main methods by which the government sector finances itself. At present the government approaches the private sector in two guises: that of the hard hearted tax collector -- pay up or else, or the weedling bond peddler -- please buy some bonds. With the tax-bond, first proposed by William Krehm,[1/] the government allows the public to buy low interest rate bonds in lieu of taxes. Thus the tax-bond goes a step beyond the war bonds which President Reagan and other movie stars helped sell to finance World War Two. It was wise to finance part of the war by low interest rate bonds rather than by either taxes or money creation for important supply side reasons. Had taxes alone been used, the marginal rate on ordinary Americans would have approached 90% with important supply disincentive effects. Had money creation alone been depended on we might have created the kind of hyperinflation endured during the American Revolution and Confederate States periods. Instead we used all three; compulsory tax payments, all but compulsory war bonds, and new money creation, together with wage, price and interest rate controls, together with credit allocation, to fight the largest war in history with the least inflation. The tax-bond has the potential to save the Treasury billions of dollars of interest as high rate marketable securities are replaced by low rate tax-bonds.

But let us make the tax-bond proposal more specific. The Reagan administration has committed itself to a series of tax cuts over the next few years which will

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[1/] See William Krehm, Price in a Mixed Economy: Our Record of Disaster, Thornwood, Toronto, 1975; Babel's Tower-The Dynamics of Economic Breakdown, Thornwood, Toronto, 1977; How to Make Money In A Mismanaged Economy, Thornwood, Toronto, 1980.

cost the Treasury several hundred billion dollars. In time the "Laffer curve" -- by which low tax rates are supposed to generate high tax revenues -- may be vindicated provided that investment is not strangled by high interest rates. Certainly the Canadian experience of tax cuts every year since 1974, large deficits and high interest gives no support to the "tight money-loose fiscal" dream of the supply siders. Therefore we urge that Congress amend the tax cut law to require households and businesses to take their tax cuts in the form of, say, 3 year tax-bonds paying 6 percent. With current tax laws and the current recession the Federal government faces the prospect of deficits of $60 to $130 billion per year through 1984. These deficits are all interest, which has reached $100 billion per annum on a Federal debt of $1 trillion. If, to give a representative but realistic figure, $100 billion of tax-bonds per year paying 6 percent were substituted for the same amount of marketable issues paying 15 percent, the Treasury would pay out on the tax-bonds only $36 billion in interest over the first three years instead of $90 billion on the marketable bonds, for a deficit shrinking saving of $54 billion. Furthermore, as deficits shrank and more and more maturing marketable debt was paid off, these funds would be available at fallen rates to the private sector. Then as market rates fell, the rate payable on new tax bonds could be cut further, to 4 percent and ultimately to 2 percent. The tax-bond could also be incorporated into further investment expanding, anti-inflationary programs. For example, corporations which stepped up their investment in new capacity could be allowed the valuable privilege of buying tax-bonds instead of paying part, or all, of their profits tax. A new incentive to noninflationary wage-price behavior could be added to the "carrots" and "sticks" proposed by Wallach, Weintraub and Okun for their various tax based incomes policies. Corporations and unionists which made noninflationary wage-price settlements would be allowed to buy tax-bonds instead of being taxed, while those who persisted in inflationary behavior would have to pay penalty tax rates.

To reinforce the effect of tax-bonds in driving down interest rates, we further urge that the Federal Reserve System lower its discount rate to 1 or 2 percent, while committing itself to add no more than, say, 5 percent per annum to the monetary base. This move would greatly lower the cost of borrowed reserves to the banking system and put them under heavy pressure to lower their prime rate drastically rather than marginally. For the main debt and interest problems of our society are in the private sector, not the public sector. The private sector owes over $4.1 trillion of the $5.6 trillion total U.S. indebtedness; private debt has grown far more rapidly than has total debt (21.0 times since 1950 versus 11.8 times for total debt) and it has pledged to pay "itself" even higher rates of interest than has the public sector. But how many corporations are able to earn 15%, much less 20% or 25%, on capital invested? Very few of them can, with the result that the stock market has plunged and high interest rates have dealt real investment a double blow: few investments promise prospective yields higher than the rate of interest, and firms can do better by lending their surplus funds on the money market than by re-investing them in expanding their own business. Low interest rates will reverse these factors and, aided by credit controls, channel funds into real investment.

What will be required ultimately is a return to usury laws to hold market rates down to rates which the economy can pay without setting off cumulative booms and busts. It would be best to achieve these drastically lower rates by close international coordination -- to prevent hot money flows and consequent exchange rate instabilities. However, in the absence of such agreement the U.S. should go it alone. The inflationary impact of some decline of the dollar internationally would be small relatively to the inflationary impact of the high rates themselves and, furthermore, a declining dollar stimulates exports.

But how low an interest rate should we aim for? Luigi Pasinetti, in a recent and very important article,2/ has supplied us with an answer. He shows that in the, admittedly abstract, world of a pure labor economy, that the natural rate of interest is the rate of increase of the productivity of labor. If the market rate rises above the natural rate the income share of the "rentier" rises, shrinking the shares of profits and wages, and if the market rate shrinks below the natural rate the "euthanasia of the rentier" once advocated by Keynes, ensues. Extending Pasinetti's argument to a money economy we argue that in the attempt to avoid the fall of profits occasioned by too high interest rates, businessmen will raise their prices, and attempting to avoid the fall in real wages caused by the rise of prices and interest rates, workers will demand higher wages, which will lead in turn to still higher interest rates. Thus high interest rates cause cumulative inflation -- financed by layering more and more debt claims per dollar of money supply. The economy will ultimately become top heavy and crash, and then, after a period of bankruptcy and depression the whole dreary business will start over again. Attempts to stop inflation by monetary restriction will fail, as they cause interest rates to rise all the more, even as real output shrinks. Anti-usury laws, on the other hand, by slowing the money lender relatively to the wage and profit recipient may prolong the boom.

Pasinetti's insight that an economy can afford to pay an interest rate no higher than the growth in its real per capita income shows us how

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2/ Luigi L. Pasinetti, "The Rate of Interest and the Distribution of Income in a Pure Labor Economy", Journal of Post Keynesian Economics, Winter 1980-81, III-2 pp. 170-82. For an extension of his argument see his Structural Change and Economic Growth (Cambridge University Press, Cambridge 1981) "unnatural" current rates of interest have become and just how far the "conventional wisdom" of today is from true wisdom. It also shows us that ancient wisdom, long scorned by the "worldly philosophers" of modern economics, was indeed based on sound insight and observation. We refer to the prohibition of interest taking in all the books of ancient wisdom of our society -- The Bible, the Greek philosophers, The Koran. For in a world with zero productivity gains, a world where for hundreds of years the standard of living does not rise, what is the "natural rate of interest"? Clearly it is also zero, and since the market rate was far higher than zero, the result of allowing money lending was inevitable -- a society of a few wealthy money lending landlords with everyone else their tenants, servants and slaves. Such a result was the downfall of the Graeco-Roman civilization. To avoid this result ancient Israel had the Year of Jubilee -- every 50th year all debts were cancelled, all slaves set free, and all land returned to its original owners. (See Leviticus 25: 9-14).

We have a long way to go to get interest rates down to natural rates and very little time to do so if we are to avoid disaster. The capitalist system needs all the help it can get if it is to survive the 1980's. Perhaps the energies and the moral ferver of the "Moral Majority" should be enlisted in a Crusade against sinfully high interest rates.

INDICES FOR FIGURE 4

Year	Monetary Interest Paid	Total Net Debt	Nominal GNP	Real GNP
1950	1.000	1.000	1.000	1.000
1951	1.102	1.055	1.154	1.083
1952	1.211	1.128	1.215	1.123
1953	1.331	1.195	1.280	1.166
1954	1.446	1.263	1.280	1.152
1955	1.602	1.375	1.396	1.229
1956	1.807	1.445	1.472	1.256
1957	2.054	1.515	1.550	1.279
1958	2.235	1.611	1.570	1.273
1959	2.464	1.747	1.703	1.349
1960	2.753	1.841	1.768	1.378
1961	2.910	1.955	1.831	1.415
1962	3.253	2.093	1.972	1.496
1963	3.614	2.255	2.083	1.577
1964	4.012	2.426	2.225	1.639
1965	4.452	2.627	2.412	1.738
1966	5.030	2.811	2.639	1.841
1967	5.512	3.015	2.791	1.891
1968	6.235	3.297	3.049	1.978
1969	7.289	3.578	3.295	2.034
1970	8.349	3.828	3.465	2.030
1971	8.880	4.186	3.761	2.099
1972	9.873	4.662	4.139	2.217
1973	12.524	5.243	4.630	2.347
1974	15.813	5.591	5.006	2.334
1975	16.361	6.074	5.407	2.307
1976	17.651	6.754	5.997	2.432
1977	20.241	7.623	6.995	2.565
1978	24.349	8.735	7.526	2.678
1979	30.795	9.884	8.425	2.773
1980	35.422	10.866	9.166	2.769

Sources: For Monetary interest paid, nominal and real GNP various issues of Survey of Current Business.

For Total net debt Federal Reserve System Flow of Funds Reports.

TAX-BONDING AND DETAXATION - SOME POLICY IMPLICATIONS OF A PLURALISTIC VIEW OF PRICE

William Krehm

A disturbing aspect of our present troubles - the combination of high interest rates high inflation and high unemployment - is that we have been through it all before. On several occasions during the past two decades the same policies led us to the identical grim results. For each successive round we have simply raised the scale on which we applied these remedies - on the assumption that if they had not worked it was because the dosage was too weak. You cannot help being reminded of Hitler's insistence that if Germany lost the First World War it was only because the Army had been stabbed in the back and that was simply necessary to do it all again but bigger and better.

That is hardly a promising pattern. If it is left unchallenged, we can foresee that two or three years from now our central banks will be trying to cure 20% "inflation" with a 30% interest rate and 20% unemployment. Our main trouble is in fact not "inflation", but the breakdown of our ability to think out our economic problems. It is time that we faced the point.

To do so we must start by taking nothing for granted. We must adopt as our point of departure observable relationships rather than shopworn dogmas.

For the past two decades an increasing number of businessmen have based their strategies on the realisation that borrowing money on long term at fixed rates can be as important a way of building up equity as retaining revenue earned. That is because the rise of our prices has long since ceased being a cyclical affair. Instead our economy has developed a structural price gradient that has become its basic topographic feature. No policy that pretends that the price gradient is not there, or assumes that it can be made to vanish by manipulating supply and demand interest rates and money supply can bring us anything other than further harvests of disaster. We must start rather by trying to understand the very different forces that have gone to create the price gradient that is so crucial to our affairs.

The conventional equilibrium model that dominates economic theory makes it impossible for us to do so. For that model - whether in its monetarist or Neo-Keynesian variant - explains everything in terms of a single system and two variables: the balancing of supply and demand in its chosen system. It assumes a stable price level to be possible. Such a premise is derived neither from a reading of history, nor from observing what is going on in our own world.

Instead it is based upon setting up equations and setting the first derivatives of their variables at zero - a simple device in elementary calculus now taught to senior students in our high schools. Once this has been done, and palmed off as high science, there is no way of working your way out of the bind. It has become the very idiom in which you must discuss all matters; your wits have become imprisoned in it like a fly in amber.

We must then scrap the whole idiom of marginalist theory. Instead we must put together a model around the pluralism of our society. Whenever we can detect a factor feeding an influence into price by a logic of its own rather than by the market code, we must set it up as a separate subsyste. And yet as different as such subsystems may be they do feed one into the other and by their interplay determine the trend of price.

In this paper I will examine only a few of these subsystems (1) - just enough to get on with our tax-bonding theme.

There is to begin with, the "pure and perfect market" in which supply and demand do a constant balancing act around equilibrium points. Apart from the stock market, few such markets ever existed, but in a broad sense it corresponds to the rationale of 19th century capitalism. The forces that injected discordant notes into this idealized system were later to develop into fully articulated subsystems of their own. Everything in this cheerful model tended towards a providential equilibrium and increased supply was supposed to create its own demand (Say's Law). I will incorporate this model as a subsystem of our scheme because it does express a fragment of reality (Diagram A).

How tiny a fragment became clear during the Depression of the Thirties. With considerable anguish Keynes and others were finally able to fashion a model that embodied something that many layman had long ago grasped: when factories shut down the economy did not move towards equilibrium but a gathering momentum f unemployment took over. Or in the terms of the Keynesian model: rather than oscillate around equilibrium points aggregate demand and aggregate supply feed positively into each other. (Diagram B). The system becomes non-convergent.

I call this subsystem the Keynesian. As it came to be recognized, our economy became a managed economy. Governments were called upon to work the controls - spending more than they collected in taxes during slumps and taxing more than they spent in boom periods.

But the effects of all this on price were overlooked. Absorbed by the great problem of the Thirties, Keynes for the most part did his reasoning in real terms. The links between our subsystems 1 and 2 were hardly considered. They had been conceived in isolation. After the war the neo-Keynesians sought to remedy this by erecting a grand model that would reconcile the Keynesian theory with the marginalist idiom in which economists had been trained to think. The link that tied the two into a whole was that if need be, governments could "syphon off" excess purchasing power by upping taxes, and in this way prices would be made to return to equilibrium points.

Few economists believe that sort of thing today, though you will find it in our textbooks. But most of those who question the model still evade the real point - for the full reality cannot be reconciled with the basic marginalist idiom that takes price to be determined by supply and demand and little else. They therefore blame unbalanced government budgets for price increases that are in fact due to the increase in the ratio of our public to private sector.

To make the point we might try one of those little "thought experiments" that Einstein was so fond of. Suppose aggregate demand to remain unchanged but a substantial portion of it to shift from the private to the public sector. What would the effect be on the price level? The conventional answer - though the question is never asked - would be that prices would stay the same since the ratio of aggregate supply to aggregate demand would be unaltered. The correct answer however, is that prices would have to rise, because more of the national product would take the form of unpriced public services distributed not against market payment but along redistributional lines. The increase in unpriced public services would have to be paid for by levies on the factors and products of the private sector, and would inevitably leach into price. To argue the contrary is to believe in perpetual motion in the possibility of getting something out of nothing.

That in fact is one of the things we have been doing. Governments as well as trade union leaders can be found refering to their real take-home pay as the workers' standard of living. Lost from sight is the growing basket of unpriced public services that we have all been getting and clamoring for more of. But since we overlook a parcel of value received, inevitably a deficit must appear somewhere in our reckonings.

That however is only one of the deficits that a false economic theory has created in our economy. That theory indeed has addled our social accountancy. and made it quite literally impossible to keep aggregate input and output in balance. The government budgetary deficit, for all the attention it receives, is only one of these deficits that we are suffering from. and it is not necessarily the most important. In a nutshell our trouble today is that these unperceived deficits have grown until the economy has come to resemble Swiss cheese - in areas there are more holes than substance. It stands in imminent risk of caving in.

The reason that economists have never performed the elementary "thought experiment" outlined above is that their model does not allow them to add up costs to arrive at price. Instead they kid themselves that they know the answer in advance: in all but the short term aggregate price should be what it used to be. And that magic goal is to be achieved by balancing supply and demand.

Since I do not subscribe to that theology, I show the Keynesian subsystem feeding positive into the Social Lien subsystem and thence into price. I use the term 'Social Lien' to denote the total taxation that filters into price. And the subsystem that expresses this relationship is the Social Lien subsystem (Diagram C). The crucial ratio here is Taxation: Tax Base. Broadly this ratio reflects the relative magnitudes of the public and private sectors. As the numerator grows the denominator diminishes and the ratio grows in a non-linear way. In addition to its implications for price. the growth of this ratio indicates that more economic decisions are shifting from the private sector to government that non-market logics are increasingly taking over. When that fraction attains a certain value, the state finds that it has less space in which to maneuver.

The development of the Keynesian subsystem set up the framework for a managed economy: the pluralistic world ushered in by World War II filled that frame to the bursting. Differences in the treatment of races, classes, sexes were to be lessened if not eliminated. Social security was to be provided from the cradle to the grace. Vast migrations provided the advanced lands with abundant cheap and motivated labor. But in the prevailing egalitarian climate the immigrants assimilated rapidly to the standards of the host countries, and greatly different price tags came to be set on their efforts.

Much of this levelling process did not take place through the interplay of market forces, but by political process: higher minimum wages, anti-discrimination laws, and social pressures. So important has this become that it simply must be viewed as a separate subsystem. It feeds a positive input into the price level that is simply not reversible by market manipulation. No matter what Mr. Volcker may screw the bank rate up to he is unlikely to bring back Jim Crow. At most he can ignite the black ghettoes.

I call this system the Social Revalorization subsystem. It contributes a positive component into the Social Lien subsystem since more government expenditure is called for to implement such things as anti-discrimination legislation, and the public payroll is up because of the higher wages of minority workers. If the Keynesian subsystem is unsatisfied we have mass unemployment that transmits positively into the Social Revalorization system: unemployment breeds discontent and generates pressures that give rise to more government expenditure. The interplay of these subsystems is intricate and anything but self-balancing.

Still other economic subsystems have come into prominence: it is of the nature of our pluralistic society to breed such subsystems as rabbits do rabbits. For example the Non-Renewable Resources subsystem. With the Keynesian system calling for an exponential growth of output and the Social Revalorization system enjoining more of the good things of life for all, pressure on non-renewable resources tends to mount along an ever steeper curve. Production must shift to ever more costly sources - to oil drilling under oceans and in the Arctic. Manipulating supply and demand can hardly alter the basic picture here: at best it can make things better or worse in the short or medium term. Thus if we believe that we have heard the last of the energy crisis because of the current oil glut, we are inviting rude awakenings.

Then there is the Interest Rate subsystem. Though ignored by economists, the structural price gradient was sooner or later bound to force itself upon the attention of lenders. They had for a couple of decades been getting their long-term fixed-rate loans back in clipped coin and eventually were bound to come to the decision that if they were to lend long-term at fixed rates at all it would be at rates that more than took care of the price gradient. Improving on that, central banks pushed up interest rates a coupld of notches further 'to lick inflation'. A new subsystem arose based on a blend of its own logic and plain bad economic theory. It is literally devouring the economy alive. There are, after all, few industries that can count on a 20% return on investment even in good times.

Interest rates set an economy's time horizon. To determine the feasibility of a capital-intensive investment, future income flows are discounted at prevailing interest rates to determine their present value. If those rates are in the 20% area, any income flow five or six years away becomes practically irrelevant. Under such conditions it is impossible to plan megaprojects, let alone finance them.

How are we to find our way through this tangle of subsystems and sort out their linkages? Here we can learn something from physics. The entropy principle in thermodynamics tells us that energy, though universally present can be put to use only if there is a difference in energy levels (potentials) that can be harnessed. The most obvious economic parallel is the Great Depression. Willing hands and materials were abundantly at hand but prevailing theory and institutions ruled out potential differences that could set these in motion. The relevant potential difference of course, in this instance was unsatisfied aggregate demand.

In all the subsystems I have outlined the potential differences - or 'negentropies' can be expressed by a given ratio. In the Social Lien system it is the proportion of public to private sectors. Once that ratio rises to the point where it interferes with the functioning of the private sector, that sector breaks down under the burden of taxation and alien logics. In the interest rate subsystem, interest rates may rise to a percentage of the net product where they simply eat away at the vitals of the economy.

Such are the patterns that we must train ourselves to think in rather than those dictated by the reversible equilibrium model. For entropy build-ups are not reversible. Only by tapping negentropies of other subsystems can the entropy build-up be rolled back. For as in thermodynamics negentropies can be transferred from one system to another but only at the risk of depleting the donor system. Gravitational potential can be translated into voltage, which in turn can be transformed into differences in temperature. That is the sort of thing Keynes achieved in economics. He created negentropy in what I call the Keynesian subsystem through government expenditure and piped this into the market economy.

To assess any policy we must track its effects through all the subsystems of the economy and see what it does to their negentropies.

Conventional theory does not allow to think in such terms. Instead it is ever absorbed in balancing supply and demand of one sort or another. Thus it bring two-dimensional solutions to multi-dimensional problems. Such two-dimensional solutions - the so-called "trade-offs" - whether the Philipps Curve, the Laffer Curve, the monetarist attempt to control prices by controlling money supply, or the proposal to control price by controlling wages - are all sure passports to disaster. Once we have established that our problem is n-dimensional ($n > 2$), we have proved this by the most rigorous of all mathematical methods - abstract structure. And the existence of many identifiable economic subsystems tells us that our 'inflation' problem is multi-dimensional. (3)

For any particular problem, the various subsystems must be studied to determine which of them contributes a significant input to the problem in hand. The other for the purpose can be disregarded. But the interaction of all relevant subsystems are crucial and must not be neglected in the name of simplistic "trade-offis". (4)

Some important lemmas emerge from this analysis. We must expengu the term 'inflation' from our vocabulary as a misleading false aggregate Price movement may result from any of many different causes. There could, of course, be an excess of demand over supply that would be reversible by dampening demand. But it would be necessary to prove the existence of such excess demand, and not just 'deduce' it from the price rise. The latter could be caused by any or all of the structural factors metnioned - or yet others that I have not introduced for lack of space. (5).

The equilibrium model rivets attention on non-existent equilibrium points and distracts ~~the attention of~~ economists from those critical ratios that are the entropy gauges in the various subsystems.

Let me offer some examples.

For years the proportion of public to private sector was completely ignored by the profession although it was an easy statistic to come by Even today as I have remarked the argument is shifted from that ratio to the matter of unbalanced government budgets, which is quite another matter.

In the Keynesian subsystem, instead of paying heed to the ratio of aggregate demand to aggregate supply, the existence of an 'overheated' economy, i.e. an excess of demand, is deduced from rising prices.

It would be sensible in any discussion of interest rate levels, to ask what proportion of our net product is being appropriated by money-lenders. Instead of that, just about any rate of interest, no matter how high, is taken to be salutary so long as prices have not been brought back to where they came from.

Real relations are in this way shut out of economists' vision by a model that is essentially a plaything. It is therefore hardly surprising that numbers themselve should shed much of their meaning and fall victim to the inflationary syndrome. A few months ago the heads of our central banks on this continent had taken to defending their rates as real bargains, in real terms. However, when under the impact of bankruptcies the price indices dropped to single-digit levels interest rates stayed stuck, leaving a brutal spread for real interest rates of about 12 - 13 percent. But the enormity of exacting such real rates from a mortally ill economy does not even occur to Mr. Volcker. Besides 12 - 13% sounds like a sheer bargain to ears grown accustomed to figures like 18, 19 and 20%. The truth is that mistaken stabilization policy has accustomed money-lenders to the taste of blood. It will not be easy to wean them from it.

Once the price gradient comes to be perceived, it undermines the very bases upon which the economy has functioned. Essential instruments - for example, long term mortgages or bonds at fixed rates - are practically knocked out. We have reached that stage today. Only a relevent theory can equip us to design the policies and instruments to take the place of those that our price mobility has rendered inoperative.

What we have need of is a fresh way of looking at familiar things. With the price gradient established, long-term loans at fixed rates can be as certain a way of transfering wealth as payment in the coin of the realm. Yet there are differences between these two modes of conveyance of value that can provide the key for managing our refractory economy.

Over the past two decades and more many firms have survived and even flourished through their recognition of the price gradient, and the degt-managing strategies they have built around it. Though they may have earned little or no profit from their day-to-day operations, they grew equity through the shrinkage of the real value of their debt. Governments however have closed their minds to the existence of the price gradient - except when it came to escalating the salaries of politicians and civil servants to 'inflation'. They were simply too committed to 'licking inflation' the day after tomorrow to be able to take the time off to ask whether in fact it could be done.

Tax-bonding, as I have proposed it, transfers to the government the revenue it needs, but in a way that is less destructive to the private sector. To achieve such a goal we must be alert to the direction in which the price gradient slopes, and hence the direction of the resulting wealth transfer. (6)

Governments would give firms the option of converting a portion of their taxable income into long-term bonds bearing coupons well below market rates. Note well that what the firms would be lending the government would be not their present taxes, but a portion of their taxable income. That would put into the hands of the government more than just the taxes forgone. Government debt would thus shoot up; and yet the state would be anything but improvident in contracting debt on such a basis. An understanding of the structural nature of the price gradient and a study of its components should be enough to allay anybody's fears on that score.

Moreover money raised in this way would be earmarked for capital expenditures - the renewal of infrastructures, frontier technology, inexpensive housing retraining of the labor force, etc. Incurring such manageable debt at modest rates, with the principal bound to shrink in real value would qualify for high marks by any criterion of providence.

With little understanding of the circuits feeding taxation into price governments have made a practice of financing human and physical capital from current revenue. In doing so they have needlessly burdened our prices with taxation, and added to the steepness of the price gradient. Some of the shrinking debt contracted through tax-bonding would restore a proper amortization of this human and physical investment.

But why should firms lend the government money on long term at less than market rates? Part of the answer is that the tax-bonds would be carried on their books at face value: the loss of their real worth would be gradual and meanwhile the bonds would fill a vital defensive role. Not only would they underpin their balance sheets - and that has become a major need throughout the economy - but in a pinch they could be sold or borrowed against. If sold of course, it would be at a discount of course. By the time they had shed a substantial portion of their value thry would already have served a vital purpose both for the firms and the economy as a whole. For the government could use the inexpensive money raised in this way to replace those long-term fixed rate instruments that have vanished in socially sensitive areas of the economy.

There would be no need to give the tax-bonds a coupon amounting to an insignificant fraction of prevailing market rates. For much of their effectiveness they would rely on the compounding result as the influence of cheap money passed from one to the other subsystems of the economy. An 8 or 9% coupon would do the trick as well or better than a 2% bond. For 9% was the market rate only a few years ago; it is entirely credible - with imaginative policy design it is still within our reach.

Indeed the success of tax-bonding in moderating the slope of the price gradient would hold out to the tax-bond subscriber the chances of capital gain.

If excess demand were really ascertained to exist and it was found necessary to 'cool' the economy. the desired result could be achieved by lowering interest rates on new tax-bond issues. That would increase the discount on them make them less attractive, and probably result in putting less money in the government treasury. Fighting 'inflation' by lowering interest rates is surely an intriguing innovation.

It might, of course, be argued that the real worth of the bond should be reported each year on the firm's books; and that were that done, many of the advantages of the tax-bond would vanish. But that is hardly realistic. Ignoring the price gradient has led to some wild gaps between the real world and the accountancy enforced by governments. Taxation is based on the historical rather than on the replacement costs of physical capital; real living standards of workers are reckoned as the buying power of their take-home pay, and so forth. Reassessing annually the replacement costs of fixed capital and of inventories and entering these on the firm's books may have much to commend it. When all this has been achieved and we have stepped into the clear-eyed world of real-value accountancy, then carrying tax-bonds at face value would be open to some valid criticism. But we are light-years from that happy state of affairs and travelling in the wrong direction. Carrying tax-bonds at their nominal value would merely tilt matters to lessen the distortions introduced into our accountancy by ignoring the price gradient.

By revitalizing the various subsystems of the economy, tax-bonding could open to governments a whole repertory of options. They would find it possible to scoop away entire layers of taxation from price. Subsidies could be cut: in the case of vital industries requiring support the subsidies could be replaced by inexpensive loans of the funds raised through tax-bonds. Between lower interest charges and the detaxation of building materials, for example, the capability of the private sector to provide much low-cost housing might be restored once more.

As the government had less need to go onto the capital market to fill its borrowing needs, money would be more readily and cheaply available to the private sector. And with interest rates lower, our economic time horizons would be pushed back: many long-term projects would once more become feasible. All this would help satisfy the Keynesian subsystem - unemployment would thus become less of a burden on the treasury.

With the need for state grants and subsidies curtailed, more decisions would be returned to the private sector. and the dead weight of bureacracy eased. Such effects would tend to compound one another: the dismal scenario of the past decades would be run in reverse.

Tax-bonding could be extended to private citizens as well, in a way that would lighten the load of social services for the state. Redemption privileges at par might be offered to private holders under closely spelled-out circumstances: job loss. illness of a bread-winner. a dependent going to university. the purchase of a first home. and so forth. The scheme would thus blend features of social insurance. and welfare with its primary purpose. and help more citizens acquire real equity in their homes. That, of course, is important for the balancing of the price gradient.

There is hardly a worthy social program that could not be at least partly financed either with money raised through tax-bonding or by such redemption provisions. Indeed in one of its aspects the money raised through tax-bonds could been seen as something of a social security fund. This redemption technique would thus enable us to harness the price gradient yet a further time.

The redemption feature. could also be built into corporate tax-bonds. The bonds could be cashed in at par for investment in favored areas or to defray the cost of introducing special pension schemes. to help with environmental protection, for the construction of homes for employees.

This redemption feature offers an interesting tool for coping with the risk pressures that threaten to immobilize our economy. Given the collapse of meaningful social accountancy, the rules of the red-clawed jungle have taken over. Famished state bureaucracies are preying upon the capital resources of just about any part of the private sector not yet in distress.

The treasury is simply driven to appropriate resources wherever they can be detected without pausing to ask what in fact may be golden eggs and what plain goose. This has heightened the risk factor in today's business world; and that, of course, has helped drive up interest rates. For make no mistake about it: part of our interest rate is simply an insurance component against this climate (8) of high risk.

By placing massive funds in the state treasury tax-bonding could provide an opportunity - probably the last chance - of establishing a feasible working relationship between the public and private sectors. Indeed the whole program can be advanced only with a weighty caveat: the generous access of funds into the state coffers must be used wisely for the restructuring of our whole taxation system. That however is not possible unless we have attained an understanding of how we got ourselves into our current troubles - by attempting to run a pluralistic economy with precepts deduced from a two-dimensional economic theory.

The crisis that has overtaken our long-term financial instruments merely reflects a more fundamental crisis of our social accountancy. We have simply been using the wrong algorithms for the distribution of our net product. As a result what should be routine transactions between one economic group and another have too often become aggressions. When you attempt to allocate more than is there, no other outcome is possible.

In its way Reaganomics was an attempt to remedy this. But it focussed on a purely local aspect of the social topography - the impact of increased publis expenditure on the price level - and shut out equally important features: notably the need for increased, if more carefully costed public services, the inevitability of a structural price gradient and indeed the very pluralism of our society. Inevitably the policies flowing from such a vision turn out anything but neutral. Like all simplistic two-variable solutions to multivariable problems they must be agressive in the interest of certain groups against others. That they profess to be quite the opposite - an idyllic return to the Eden of free enterprise - only underlines the point. For the real concerns of those who must suffer are merely excised from its perspective. Thus responsibilities are unloaded upon state governments without the funding to meet those responsibilitie : there is ingenuous talk of reducing government expenditure when the administration is revving up for the largest armament program in history.

To reestablish meaningful boundary markers between capital and revenue we must formulate algorithms for distribution that are relevant to our reality. There is no way of doing this without an understanding of the structural price gradient that has become the central feature of our world. Once we have done so, we shall be able to make use of it for the neutral transfer of wealth - i.e. for the transfer of wealth as it is formally supposed to be transferred. That is what tax-bonding is about.

Our Reagenomists have recognized the menace in the rank growth of public spending. That could identify the key to useful policy design: in large part taxation must be replaced by the only other mode of transfering wealth to the government - through the long-term attrition of long-term debt. Once we have established a valid neutral algorith for the distribution of our net product, we shall have no difficulty in handling the current crisis of our long-term financial instruments.

SUBSYSTEM DIAGRAMS

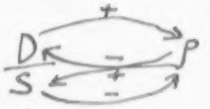


Diagram A

Demand (D) feeds positively into Price (P) and P negatively into D. The whole thus tends to balance. The same relationships obtain between Supply (S) and Price. The structure is thus self-equilibrating.

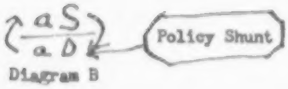
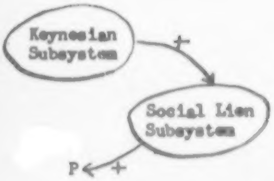
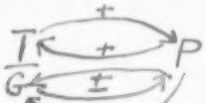


Diagram B

Aggregate Supply (aS) feeds positively into aD (Aggregate Demand). The two like signs in the two legs making up a cycle indicate that the structure is not self-balancing but divergent. The Policy Shunt is there to show that with the recognition of this and the need for state intervention to create aggregate demand when needed, the economy has become a managed economy.





Relationships between the components of of the entropy ratio of the Social Lien subsystem and Price

Diagram C

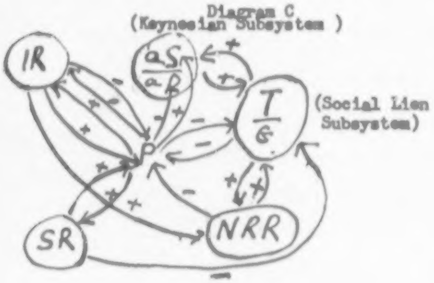


Diagram D

IR = Interest Rate Subsystem
NRR = Non-renewable Resources Subsystem
SR = Social Revalorisation Subsystem

$\frac{aS}{aD}$ is the entropy ratio of the Keynesian subsystem

$\frac{T}{G}$ is the entropy ratio of the Social Lien subsystem

NOTES

1) William Krehm

Revue Economique, Paris, May 1970, *La stabilite des prix et le secteur publique.* Thornwood Publications,
Price in a Mixed Economy - Our Record of Disaster/Toronto, 1975
Economie Appliquee, Archives de l'IS.M.E.A., Librairie Droz, Geneva,
Tome XXX - 1977 -No. 1 . *The entropy concept as a tool of economic analysis.*
Babel's Tower - The Dynamics of Economic Breakdown, Thornwood Publications,
Toronto, 1977
How to Make Money in a Mismanaged Economy and other essays,
Thornwood Publications, 1980, Toronto.

2) The tyranny of two-variable trade-offs in our economic thinking is, of course, parallel to the same thought-structure in behaviorist psychology that reduces human conduct to two variables: stimulus and reaction. For a comprehensive treatment of the latter see Arthur Koestler, *The Ghost in the Machine*, Hutchinson of London, 1967. Thus on p. 4:" The crude slot-machine model....the dog on the laboratory table, predictably salivating at the sound of a gong, has become a paradigm of existence, a kind of anti-Promethean myth; and the word 'conditioning', with its rigid deterministic connotations, has become a key-formula for explaining why we are what we are, and for explaining away moral responsibility".

Here you have the counterpart of the supply-demand model in economics that has been raised to the absolute determinant. In abstract structural terms, the two syndromes are perfectly parallel - except that the supply-demand model goes further. It postulates reversibility of the relationship, to the point where the salivation of the dog on the table would produce the sounding of the gong.

All this can be referred to the difficulty - even in mathematics - in dealing with more than a two-body problem. Even Newton dealt with gravitation as a two-body problem, but he had the wit to assess the true effects of the other celestial bodies and handle their influences as perturbations. Economists, however, have shown themselves incapable of even admitting more than a single two-variable trade-off. If attention at any moment centers on the relationship between a particular couplet of variables, previously recognized couplets of variables are dropped from consciousness. Thus the aggregate demand-aggregate supply couplet of Keynes has been forgotten to make it possible to grasp the connection between

NOTES (2)

tax increases and higher prices. Predictably when Keynes becomes rehabilitated - as he is bound to be before long - the 'tax-inflation' couplet will be dropped from view.

3) For example, the notion of reachability which determines whether in fact one function, or one situation can be arrived at from another. Thus Louis Padulo and Michael A. Arbib System Theory - a unified state-space approach to continuous and discrete systems, (W.B. Saunders Company, Philadelphia, 1974, p. 202): 'If the state space of the linear system whose state transitions are described by $X(t+1) = F x(t) + Gu(t)$ has dimension n, then the system is reachable if and only if the block-partitioned matrix $(|F^{n-1}G| \ldots |FG|G|)$ has rank n'. ('x' is the state variable and 'u' is the input).

The concept of 'state space' is crucial. In one aspect it is a sort of memory bank of all previous inputs and their interreactions; along with future inputs it carries the information that enables you to predict future outputs. Where U = input set and X the state set and 'f' the local 'transition function'

$f: X \times U \rightarrow X$

and where 'g' is the local output function, and Y the output set

$g: X \times U \rightarrow Y$

Conventional equilibrium theory deals not with sets of input and output variab but with a single favored input and a single favored output variable - the famous trade-offs. Then there is little in its methodology that remotely resembles a state set - past and future being completely reversible to its mind, there is sca room for memory banks, especially those involving dynamic functions.

Applying xxxxx state space theory to economics the input set would consist o those independent variables drawn from all the economic subsystems, each reflectin its peculiar logic. The set of state-space variables would basically be the entrop ratios of the various subsystems; the transition function 'f' relating inputs to the state variables would reflect the actual circuits linking the subsystems and their entropy ratios.

Using the concepts of reachability, controlability, and observability,

NOTES (3)

economists could convince themselves in a trice that the attempt to stabilise prices by monetary policy, or by slashing taxation across the board, could not possibly work. By rigorous mathematical proof the goal is simply not reachable.

Observability concerns the possibility of tracking back a set of output to a set of inputs. That will depend upon the structure of the function mapping the second set S upon the first f(S). The function must be injective : $s_1 \neq s_2$ must imply $f(s_1) \neq f(s_2)$. This is a way of saying that the relationship of the two sets is one-to-one; ~~and that~~ It must also be surjective (i.e. 'onto): f:S must cover the entire codomain onto which S is mapped. (Michael K. Sain, Introduction to Algebraic System Theory Academic Press, New York, 1981, p. 30). Only when these conditions obtain can the f(S) set be related to specific members of the S set, i.e. be observable. Closely connected with injectivity is the concept of invertibility - i.e. the possibility of using the sequence of outputs to reconstruct the input sequence (Sain, p. 97). Clearly unless we are working with functions of identical rank on either side of our equivalence, this can hardly be the case.

Conventional economists cut a corner here. Rather than study the structure of the mapping function, they assume all equations to be invertible on theological grounds.

4) As an example of this sort of analysis let us examine some of the effects of high interest rates~~[illegible]~~. For this I refer the reader to Diagram D below.

In this diagram wherever an entropy ratio is shown in a particular subsystem, it is important to distinguish between a positive input into the system and a positive input into the entropy ratio resulting in its growth. The growth of the entropy ratio indeed signifies an entropy build-up and hence a decline in the subsystem's negentropy, a deterioration of condition. Thus there is a positive linkage between T/G in the Social Lien Subsystem and Price (P) which could also be expressed as a negative link between the Social Lien Subsystem and P. In this diagram I have chosen the latter. What is important is not which formalism we adopt in this respect, but whether the two links between two subsystems, making up a complete cycle are of the same or different signs. In one instance the ~~[illegible]~~ circuit is divergent, in the other it tends to be equilibrating.

NOTES (4)

I have reversed my previous use and show the entropy ratio in the Keynesian Subsystem as aS/aD - aggregate Supply over aggregate Demand. This is better to reflect the entropy build-up. When aS exceeds aD the subsystem is in trouble. Of course, in that case the entropy ratio would exceed unity, but that is a ~~f~~ purely a formal matter that is readily remedied. Potentials always involve an integration constant that is arbitrary, and we can choose one for the calculation of aS that would lead us to the more standard form associating zero negentropy with the absence of any potential difference between aggregate supply and demand. We could, for example, choose a constant of integration for aggregate Supply that historically pro/left the entropy ratio in a healthy state.

In those subsystems where we do not show the entropy ratio, the diagram reads more simply. Thus in the Interest Rate Subsystem (IR) the entropy ratio is given by the ratio of ~~prevailing interest rates to~~ the quantum of interest paid by producers to the total net product. As this approaches unity the subsystem is in trouble. In the short term this negative input into the IR system feeds positively into Price - i.e. it is transmitted as a negative influence unchanged as producers drop their prices to avoid insolvency. But lower prices brought on by liquidation will tend to drive interest rates still higher as panic spreads, and thus contribute to a further entropy build up in the IR Subsystem in the short term. In the longer term, however, higher interest rates (lowering the negentropy of the IR system) feed into price negatively as a production cost. And higher prices making for a steeper price gradient tend to drive interest rates still higher. Hence the circuit in the middle term is thus doubly negative and hence divergent: higher interest rates increase the entropy and ~~drive up the~~ lower the negentropy of the IR system. The lower negentropy is transmitted to Price as an increase, and higher prices in turn drive interest still higher which lowers the negentropy of the IR system, further.

Higher interest rates, raising the entropy of the IR system feed positively into the Non-Renewable Resources subsystem, i.e. raise entropy there as well because projects become uneconomic, and future production is thus decreased.

Higher interest rates feed positively into the Keynesian subsystem.

NOTES (5)

They depress aggregate Demand and cause the entropy ratio to shoot up. That in turn induces a higher entropy in the Social Lien subsystem: the government must step in with more relief, more work-making programs, more subsidies to shore up a sickening private sector. That causes the T/G proportion to rise. Moreover, distress in the Keynesian subsystem, taking the form of growing unemployment, feeds positively in the Social Revalorization subsystem, spurring militancy and political pressures. This again adds to entropy in the Social Lien subsystem. It also will have ~~x~~ the effect of pushing up price as soon as the economy is permitted to recover : the trend will be for higher wages for underprivileged groups.

You would have to be both blind and an incorrigible optimist to believe with Mr. Volcker that a single of the links connected higher interest rates negatively to price (reflecting the short-term effect of threatened bankruptcy) will outwigh these multiple circuits, most of them divergent, that work in the opposite direction. You would have to be no less an optimist to believe with President Reagan that tax-cuts alone can revive the economy when the Federal Reserve policy assigns to the money-lenders a growing portion of the nation's net product. That is especially so when the Federal Reserve's monitoring of the money supply makes no allowance for the growing proportion of available credit that is being preempted to finance the mounting deficits throughout the economy caused by its very policy.

No matter how modest the parameters you assign to the links in Diagram D, the compounded multiplier effect of many divergent circuits guarantee that unless policy is radically altered we will have a recession of gathering momentum plus continued price rise.

5) William Krehm (1980) pp. 25 et seq. The Service Quota, Demographic, and Hoarding subsystems.

6) Krehm (1980) p. 56: 'What happens in the absence of a recognition of the price gradient is illustrated by the case of Industrial Revenue Bonds (IRBs) that have become a feature of industrial promotion by local governments in the U.S. "These bonds....., ~~is~~ issued for corporations through state and municipal agencies, are tax-free at the federal level. Interest is often three percentage points below the going corporate

NOTES (6)

bond rate....To Uncle Sam, they are expense account lunches - with the Feds footing the bill in uncollected taxes....Forbes estimates that over $1.4 billion (in 1980 dollars) of federal taxes - over the next 15 years - were given away by states and municipalities last year alone." (Richard Greene, No Free Lunch, Forbes, August 4,1980

Like so much of our economic policy, IRBs are based upon a complete disregard of the price gradient. As a result legislators have literally mistaken the ends of the heavy guns they have brought into play. In the case of tax-bonds, it is the principal of the private firm that will erode over the years, thus balancing the taxes forgiven. In the IRB instance, the gradient is not enlisted for such a balancing role. On the contrary. Having already received federal bounty in the form of the tax-free feature of the IRB's coupons, the industrial borrowers have a windfall capital gain thrust upon them as well.

7) We could set up a Risk Factor subsystem with an entropy ratio $\left(\frac{\text{Risk (expressed as a \% of investment)}}{\text{Foreseen Return on Investment}} \right)$. As this ratio moves in the direction of unity, the motivation, and indeed the possibility, to invest lessens and eventually disappears. By rolling back entropy in the Social Lien, Keynesian, Interest Rate, and other subsystems, tax-bonding recharges the negentropy of the Risk subsystem.

8) This would be of particular importance in the case of public companies. Today the depreciation they take on their buildings, for example, is reported on their balance sheets as 'deferred taxes' - i.e. it contributes nothing to their assets or net worth. Tax-bonding, however, would show the total taxation transmuted into tax-bonds into assets. A distortion? By no means. Once navigators came to realise that the earth was round, it turned out that plane maps involved serious distortions. The case of accountancy in the light of the structural price gradient is similar.

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POLICIES TO END STAGFLATION:
A RADICAL PROPOSAL
OR
THE "ABC ON D DAY" PLAN

"Aux Grands Maux Les Grands Remedes"

An earlier version of this paper was presented at the Eastern Economic Association Meeting in Boston, Mass., May 12, 1979.

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A Submission to the [illegible] Party Parliamentary Committee to Investigate High Interest Rates Authorized October 10, 1979.

Policies to End Stagflation: A Radical Proposal

The ABC on D Day Plan

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Introduction - Big Problems, Big Solutions

As we all know, the world economy has gone seriously haywire over the past several years and conventional economics has had nothing to prescribe but patience, fortitude, and hope that the problems will go away. As the Keynesian, so called, near golden age, 1945-69, wore on the economists' "old time religion" of "self equilibration" at full employment enjoyed an increasing revival and it was taught that the sole remaining problem was that of creeping inflation - with tight money the sole and sure cure. However, about the time that Says' and Walras' "laws" trickled back down from the arcane mathematical general equilibrium treatises to the intermediate textbooks, the world blundered into what Okun calls "The Great Stagflation Swamp" and what others have dubbed the Second Great Depression.

According to the "conventional unwisdom" of the western world the only "sound" "conservative" policy is to maintain "slack" in the economy until "inflationary psychology" ebbs, and then try for full employment - perhaps in 1984. Admittedly the cost is high, the U.S. alone wasted $100 to $200 billion a year in unproduced output in every year since 1974, but what else could governments do?

This paper presents a short list of "radical" answers to this question - radical in the sense of fundamental, of getting at the roots of stagflation, radical in the sense of being a major departure from present "taper off" policies, and radical in requiring some "thinking the unthinkable and doing the (supposedly) undo-able". Though the policies here advocated are thus radical in at least three senses, the goals sought are conservative - the maintenance and expansion of a mixed, or managed, capitalistic economic base for a liberal democratic superstructure. Thus my proposals are very much in the spirit of Keynes' "radical-conservative" anti depression monetary-fiscal policies while the specifics go beyond anything yet attempted to manage the mixed economy.

Consider how similar Keynes' situation was to our own. Conventional theory ("classical" theory to Keynes) had no explanation for the severity and persistence of the Great Depression, and policy prescriptions based upon it could only make matters worse. Although many economists, business and government leaders, and men on the street, had the good sense to advocate expansionary monetary and fiscal policy to stimulate recovery, their voices were drowned out by the voices of the "conventional unwisdom" so that useful moves were invariably too little and too late. Meanwhile, Hitler had solved Germany's extremely severe unemployment problem, and, Stalin, whatever his other sins, was not waiting around for the "Pigou effect" to do its stuff. The tragic result was that the depression was not ended by the modest expenditures on useful projects Keynes, and other, advocated, but by World War II to prevent Hitler from imposing his model everywhere. The tragedy today is that if decent, conservative, God-fearing men, such as President Carter, carry through their "conservative" slow death policy of "gradually" ending stagflation, we may get new Hitlers and Stalins who will take matters out of their hands. Present policies remind one of the little girl who thought it was cruel to dock a puppy's tail. She suggested that it be cut off an inch at a time so that the "poor little thing" could get used to it little by little. Even if the unemployed of the advanced countries will stand for the surgery advocated, the "cure" is unnecessarily cruel - and the world politico - economy is highly unstable. How many surprises like the recent events in Iran can the world financial structure stand? How long will electorates put up with governments who can think of nothing better to do than to maintain 15 million unemployed in the industrialized countries alone? For today everybody knows that "full" employment is engineered by government and depression is likewise, so that if "moderates" will not give us prosperity "immoderates" left or right -- will.

The Radical Proposals

The proposal here advocated is a "short sharp shock" end to stagflation consisting of (a) equal percentage cuts to all wage and non-wage personal incomes, (b) price cuts equal (on the average) to the incomes cuts plus the average annual productivity gain, (c) tax cuts to stimulate recovery and soften the blow of the transition to firms selling inventories at lower than acquisition prices and households locked into high interest rate mortgages, (d) a temporary freeze, or slow down, on the growth of the nominal money supply, (e) the introduction of low interest rate "tax-bonds" to finance some part of existing and future public debt. For the longer term the proposal envisions: (f) the use of some variant of TIP to hold income gains to productivity gains after the initial, more drastic, use of incomes policies, (g) a long run commitment to hold the rate of growth of government spending to the rate of growth of real GNP, (h) an attempt to avoid the "self inflicted wounds" such as Okun writes of: increases in minimum wages, reductions in farm acreage, and unnecessary governmental regulation. I call this proposal "ABC on D Day" for Across the Board Cuts on Deflation Day.

It is assumed throughout that the present regime of floating exchange rates will continue. This means that if a given country succeeds in "opting out" of stagflation by means of the above "radical" solutions it would receive partial, full, or overful insolation from world inflation by the rise of its exchange rate. The degree to which the foreign exchange rate would rise in response the above policies is important to their success and difficult to foresee. If there is a strong belief that the country will achieve full employment with stable prices its money will appreciate greatly -- so much as to threaten its ability to export. On the other hand, strong disbelief that any incomes policies can succeed, coupled with a flight from the currency because of the fall in interest rates could have perverse effects. An in between effect, with some rise in the exchange rate, and some boost to exports through lowered prices to foreigners is perhaps most likely. Let us explore the policy proposals at more length.

Incomes, Prices and Tax Cuts

The germ of this policy is contained in H. A. Turner's summary and conclusion to his, Dudley Jackson, and Frank Wilkinson's book, *Do Trade Unions Cause Inflation?* Their study indicated that in Britain tax hikes designed to stop inflation by eliminating "excess" demand were instead inflationary as they triggered wage hikes. Turner wrote concerning this:

> " ... our study indicates (fairly decisively, one might think) that 'orthodox' fiscal policy against inflation, which as it was practised in Britain in the 1960's was conceived as mopping up excess demand by increasing taxation - or, even more, by allowing direct tax receipts to rise disproportionately to income - had in fact a perverse effect. Increases in indirect taxation (of several kinds) raised prices and increased the pressure behind wage-demands: and that was particularly the impact of the increasing marginal rate of deduction, by income tax and other levies, from wage income."[1]

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[1] Frank Wilkinson and H. A. Turner, "The Tax-Wage Spiral and Labour Militancy", in Dudley Jackson, H. A. Turner, and Frank Wilkinson, *Do Trade Unions Cause Inflation?* Cambridge: Department of Applied Economics, Occasional Paper 36, 1972, 2nd ed., 1975, p. 115.

Turner points out that, given the progressivity of the British tax system and the quick responsiveness of prices to wage hikes, the traditional strategy of British trade unions was self defeating. While individual unions could boost their members' real incomes by obtaining super average wage hikes, the more successful labour as a whole was in raising money incomes the more real incomes sagged. If wages rose ten percent, prices would quickly rise about eight percent, the difference reflecting a productivity gain of about two percent. However, taxes have to be paid on the increased money wages and the result is a disappointing increase in real net of tax incomes, or even an actual decline. Furthermore, if stung by their failure to achieve real income target gains, the unions insist on an average of 20% hikes in the next round the results are bound to be even more disappointing. It is the Alice in Wonderland situation where "the faster you run the behinder you get". To the extent the increased taxes pay for increased government services which the workers perceive as increasing their real income, there is relief from this disappointment. Turner suggests that such perceptions were almost wholly absent in the British case. Perhaps this was because the increased government spending was largely in the form of higher pay for civil servants and over-staffing without corresponding increases in real benefits to the public. Furthermore, with the increasing inflation of the late 1960's and early 1970's in Britain, and the rapid transfer of resources to government spending, business investment, the source of most productivity gains and of an exportable surplus, fell.[2]

As Turner shows, the only way that British unions could increase the real incomes of their members faster than productivity growth without engineering a shift from profits which would increase unemployment would be for them to demand - in concert - both price and wage-reductions. He wrote:

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[2] This sad story is the focus of Robert Bacon and Walter Eltis' book, Britain's Economic Problem: Too Few Producers, London: Macmillan, 1976, 2nd ed., 1978.

> "The point can be simply demonstrated by using the approximately (for Britain) realistic assumptions (of) an average rate of tax on wages of 15 percent and a marginal rate of 30 percent. In that case ... a 6½ percent annual average wage increase produced a rise in real disposable wage-incomes per capita of less than 1 percent a year. Suppose, instead, that unions negotiated a general wage reduction of 6½ percent, combined with a reduction in prices (to allow for the additional effect of our assumed 2½ percent yearly rise in British productivity) averaging 9 percent. It needs very little arithmetic to demonstrate that the fall in net cash wages will be only 5½ percent: which implies that real disposable earnings will increase by some 4 percent.
>
> The difference over the normal increase in productivity, of course, would in this case be supplied by a disproportionate reduction in the government's tax yield - hopefully, even by a budget deficit. If we were operating under current assumptions of excess capacity, no harm would be done, since employment would be increased: it would, to say the least, be difficult for the government to condemn the process as inflationary."
>
> (Jackson, Turner and Wilkinson, pp. 125-6)

It would take some doing to convince union leaders to take such a course, even in England where the TUC has long had the power to take over and run the country, but not the wit. Therefore, I propose the government initiate and sell the program. Here too the barriers coming from our instinctive lapses into money illusion and fallacy of composition are very formidable. As witness, note one editorialist's reaction to my first attempt to build on Turner's insight. The following appeared in the Nanaimo (British Columbia) Daily Free Press for July 9, 1977. Good thing none of their lumberjack readers know where I live! Well, they laughed at Keynes, too... For a more temporate reaction see David Warsh's from the Boston Globe for May 12, 1979, on the next page.

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Voluntary wage cuts unlikely to see rush

The working man has every right to hate with a vile fury the economic theory of Prof. John Hotson, of the University of Waterloo, that suggests workers come to the rescue of the government to save it from inflation by making what could be called a supreme sacrifice.

The professor recently told the Canadian Economics Association that pay cuts, combined with a decrease in prices, would ease inflation and actually give workers a net increase in real spending power.

We can see it now, workers all over the nation rushing into their bosses' offices and asking to have their wages cut ... with Hotson first to reach the university board of trustees (although, through sense of duty, he should have already been there and taken a cut).

I never said that!

?

nuts

His figuring puts the blame for this current "depression" gripping Canada on government spending and says this could be defeated by the wage cuts. Naturally, if we all take wage cuts, the government won't be able to gather so much money in income tax and consequently will be forced to reduce spending. Of course, with all the new income from reduced employee salaries, companies will find it easier to reduce prices so that lower income consumers will be able to buy, provided their greater profits don't simply return to the government what the employees demand.

Obviously the bail and the blame for the current economic mess is being put squarely and confortably in the court of the working man. His greedy desire for some of the good life the rich enjoy is at fault.

Hotson's sympathies lie with the unemployed and we can't argue with him there. That nearly a million Canadians are out of work, more than during the depression of the 1930s, is deplorable. However, putting them back to work, would produce that income again for the government, and the resulting $15 billion or so in extra production would fatten the government coffers even more, both simply starting us on a new cycle of inflation.

Perhaps the effort would be worth it, just to get everybody back to work, but the Hotson theory is licked before it starts.

If it isn't the first rule of economics, it should be, that theories must be also practical ideas before they are presented as solutions. Nobody's going to inspire the entire working population of Canada to ask for reduced wages. If somebody did ask, how far would most of us be back in line, we wonder?

Hotson's strategy: Roll back the wages, prices

By David Warsh
Globe Staff

To The Editor:

Perhaps the single most rampant step that could be taken to slow down rampant inflation would be to pay people less money and to charge less for items in the store.

/signed/ J.O. Tobin

The above letter appeared last autumn, not in the New York Times, but in Not the New York Times, the parody issue of the out-of-town newspaper thrown together by a lot of newsmen and other idlers during the Big Apple's newspaper strike.

It was about as funny as one could hope to be at the time about the dismal science, as economics is often called.

Now, a respected economists has transformed grim humor to ominous soothsaying.

John H. Hotson, chairman of the department of economics at the University of Waterloo in Kitchener, Ont., is scheduled to present a paper to a session of the Fastern Economic Assn. in which he argues not for a wage-price freeze but or a wage-price rollback

Hotson calls it, in the fashion of the time, his "ABC" plan -- meaning "across the board cuts".

The title of his paper is, "Aux Grands Maux Les Grand Remedies" — For Great Ills Great Prescriptions

That inflation is a great ill is undoubted, although the fifth annual convention of the association, which ends its three-day Boston meeting today, was anything but preoccupied with it. Only four sessions addressed the topic frontally.

Hotson's theme is designed to shock listeners and it seems to do just that. No lightweight, the Waterloo professor is a member of the executive board of the EEA and a member of the board of editors of the Journal of Post-Keynesian Economics.

What Hotson recommends is "a short, sharp shock" to the economy — presumably to the American economy — administered in the form of "D-Day", for deflation.

Simultaneously, says Hotson, all personal incomes — wages and other income, too — would be cut by equal percentages, and average price cuts equal to the wage cuts plus the annual productivity gain would take place.

At the same time, the money supply would be frozen, government bonds for financing the deficit at low interest rates would be offered, and some form of middle-range wage controls would be introduced.

The result, according to Hotson, would be a short, sharp fall in the price level. The point would be to show it could be done, he says.

Hotson admits there are problems galore, beginning with the obvious one. Could there be wage and price cuts in one country and not all the others?

Another problem, stated somewhat metaphysically, is that there is no provision in the Hotson ABC plan for lowering bond rates of interest. So his plan, if enacted, would suddenly reverse the traditional skew of inflation: instead of favoring debtors at the expense of lenders, the borrowers would suddenly find themselves paying the same high interest rates with newly lowered wages.

These are details to be worked out in discussion among economists of varying stripes, says Hotson; but, not surprisingly, the proposal has already drawn the fire of some traditional friends to labor.

"The working man has every right to hate with vile fury the economic theory of Prof. John Hotson," was the way a colorful writer for the Nanaimo (B.C.) Free Press put it a couple of years ago.

Hotson, a youngish looking American who was trained in Philadelphia, is no stranger to controversy.

In 1966, in what he remembers as a transport of fury against the spiraling war in Vietnam, he hit upon the idea for which he is best known. Counsellors to Lyndon Baines Johnson were pressing for a 10 percent income tax surcharge to damp the inflation they were sure would come.

"Mightn't the price-increasing effects of a tax increase outweigh the price-decreasing effects?" he wrote in a report of his idea that was published in — of all places — the Nebraska Journal of Business and Economics. He reiterated his theme in a note in the American Economic Review four years later, and it was enough to place him among the founders — perhaps the founder — of the "tax-push" school of thought about inflation, a series of ideas that have not yet won wide acceptance.

JOHN HOTSON
...post-Keynesian

Let us turn aside, for the moment, from the very large problem of convincing people that the way to raise the real wage and to restore full employment is to cut the money wage, to examine Turner's point more fully, by means of a simple equation.[4]

If we ignore debt, real balance, and level of employment effects we have as an approximation: $\hat{NRW} = \hat{W} + \hat{r} - \hat{P}$ where $\hat{NRW}$ is the percentage rate of change of net real wages, $\hat{W}$ is the percentage rate of change in the average money wage, $\hat{r}$ is the percentage rate of change in the retention ratio ($r = (W - T) / W$, where T is the average tax per wage recipient), and $\hat{P}$ stands for the percentage rate of change of the price level. Let us assume that the average tax on wage incomes, T, is given by $T = m(W - D)$, where m is the marginal rate of taxation and D represents allowable deductions against income to calculate taxable income. Further, let us assume that the rate of change of the price level is equal to the rate of change of money wages minus the percentage annual increase in productivity, thus $\hat{P} = \hat{W} - \hat{A}$. Thus, our equation becomes: $\hat{NRW} = \hat{A} + \hat{r}$. Note that in our model of Turner's argument, the tax system is progressive only in that the average tax rate, $t = T/W$, rises with W. If, instead, we assume that the marginal rate of taxation, m, varies with W, Turner's point is reinforced.

Next we must express $\hat{r}$ in terms of $\hat{W}$. We have:

$$r = \frac{W - T}{W} = \frac{W - m(W - D)}{W} = (1 - m) + \frac{mD}{W}$$

$$\Delta r = \frac{mD}{W + \Delta W} - \frac{mD}{W} = \frac{-mD\Delta W}{W(W + \Delta W)} = \frac{-mD\hat{W}}{(W + \Delta W)}$$

---

[4] I am indebted to Jack Johnston for this equation and much that follows on the next few pages.

Dividing by r we obtain: $\hat{r} = -(\frac{mD}{rW}) \cdot \frac{\hat{W}}{1 + \hat{W}}$

Thus our formula for the rate of change of the net real wage becomes:

$\hat{NRW} = \hat{A} - (\frac{mD}{rW}) \cdot \frac{\hat{W}}{1 + \hat{W}}$ and the slope of this critical relationship is $- \frac{(mD/rW)}{(1 + \hat{W})^2}$.

Recent experience suggests that we may take $\hat{A}$ as about constant at 3 percent per annum. As is well understood, real income per capita of an economy as a whole can increase only at the same pace as real output per capita. However, a national economy can for a time obtain higher growth rates in per capita income by running a balance of payments deficit, as the U.S. and Canada are presently doing. Furthermore, during the recovery from a recession productivity temporarily grows at supernormal rates as labour is "dishoarded" and underemployed and unemployed men and machines are utilized.

Although an economy as a whole cannot increase real income faster than real output grows, individuals and sub-groups may do so either by increasing their productivity at a faster than average rate, or by inducing or forcing, society to value their inputs more. This latter tack involves some redistribution away from less favoured, or organized, individuals and groups, reducing their relative, or even absolute, incomes. Turner's point is that, although the groups able to gain sufficiently above average wage gains can benefit themselves by driving up wages, wage earners as a whole hereby suffer a lower than productivity gain increase in net real wages because of the tax effect. Much depends upon the numerical value of our tax ratio s = mD/rW, as Table 1 makes evident. Here illustrative values of 10, 20, and 30 percent, have been given to s, resulting in the varying response of $\hat{NRW}$ to $\hat{W}$.

Table 1: Rate of Change of Net Real Wage ($\widehat{NRW}$) for Varying Rates of Change of Money Wages ($\hat{W}$) with Given Tax Ratios, s = mD/rW.

		$\widehat{NRW}$	
$\hat{W}$	s = .10	s = .20	s = .30
-10	3.9	4.82	5.73
0	3.0	3.0	3.0
05	2.5	2.05	1.57
10	2.1	1.18	.26
20	1.3	- .33	-2.00

If the mD/rW, or "s" ratio, is merely .10, then quite large rates of change of money wages have quite small effects upon the rate of change of net real wages. Thus, if the money wage does not increase at all, $\hat{W} = 0$, the net real wage would increase 3 percent. However, reducing the money wage 10 percent would increase the pace of NRW to only 3.9 percent, while $\hat{W} = 10\%$, entails that NRW increases only 2.1%. Money wages would have to increase at a nearly 43% per annum to reduce $\widehat{NRW}$ to zero. Thus in a world with a small tax lien, and moderate inflation, Turner's point would be an unimportant one. As can be seen, however, in the s = .20, and s = .30 columns, thie effect becomes much stronger as the tax ratio rises. With s = .20, $\hat{W} = 17.65\%$ reduces $\widehat{NRW}$ to zero, while with s = .3, $\hat{W} = 11.1\%$ is sufficient to reduce $\widehat{NRW}$ to zero. Which of these illustrative values are approximated by real world economies?

As an approximation, only, the present tax schedule for the majority of British workers can be represented by: T = 0.35 (W - £1,000), with W = £2,500. So the average tax paid is about £525 and the retention ratio, r = £2,500 - £525/£2,500 = 0.79. Thus mD/rW = .35(1,000)/.79(2,500) =.17.7. So the British economy approximates our s = .20 column, and the large wage settlements received in Britain in recent years resulted in virtually no gain, or even a fall, in the net real wage, of the average worker.

The United States wage bill in 1978 was $1,100.7 billion and the employed labour force was 94,373,000 strong. By division we obtain an average wage of $11,663. Assuming an average U.S. worker had two dependent children a wife who did not work outside the home, which he was buying, we can calculate his total deductions and allowances as approximately $4,000.[5] Total taxes payable for our "typical" American come to $1,500,[6] thus the marginal rate of taxation, ($m = T/(W - D)$) is $1,500/$11,663 - $4,000 = .196 The retention ratio ($r = W - T/W$) is $11,663 - $1,500/$11,663 = .87. The tax ratio, ($s = mD/rW$) is .196 ($4,000)/.87 ($11,660) = .077, in comparison with an s of .177 in Britain. Thus the less heavily taxed American worker does not run into the "Turner effect" to the same extent as does the British worker.

The Canadian case lies between that of the British and U.S. examples.

The total Canadian "wage bill" in 1976 was $105,827 millions, and total employed labour force was 9,572 thousand persons. Thus, the average employment income is about $11,600. If we assume our "typical Canadian worker" had two children under 16 years, and a wife who did not work outside the home, we can add $500 of taxable family allowances, and calculate total deductions and allowances as $4,950. Total taxes payable come to $1,733,[6] thus our marginal rate of taxation is $1,733/$11,600 - 4,950 = .26, and the retention ratio, r = $11,600 - $1,733/$11,600 = .85. Our tax ratio, or s, becomes .26 ($4,950)/.85 ($11,600) = .1305. Moreover, Canada removes much of the "Turner effect" through indexing of the income tax for inflation. Canada's inflation in recent years has been less severe than Britain's, so that the frustrations of our employed workers is not as severe as that of British workers -- yet. However, Canadian inflation was enough greater than U.S. inflation that it put our balance of payments in deficit and compeled the imposition of the AIB wage and price control program. If there is one thing that Canadian workers "know for sure" is that the AIB was their enemy, in that if forced them to accept lower settlements than they would otherwise have negotiated. But our equation indicates that on average they are wrong, as does the evidence the AIB has published showing that real wages grew faster under controls than was the case in the immediately previous period. Indeed, if the AIB imposed a complete freeze of wages, coupled with a 3% fall in the average level of prices, this would result in a 3% rise in net real take home pay as there would be no additional income tax to pay (and somewhat less sales tax to pay on lower priced goods).

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[5] Personal deductions are $750 x 4 = $3,000. Mortgage interest plus local property taxes vary widely. Here it is assumed that the two deductions together with medical and charitable deductions sum to $1,000.

[6] Federal income tas on $11,663 for family of four = $ 760.00
Social security taxes on average income = 738.56
Total direct taxes $1,499.56
This calculation makes no allowance for state income taxes (which collected $63 billion in 1973), or for indirect taxes. It thus understates the taxes paid by an average American.

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[6] Income tax payable, $1,423; Canada pension plan payable $135; Unemployment insurance premiums, $175. It is here assumed that our "typical" Canadian worker lives in Ontario, and thus pays a Provincial income tax equal to 30.5% of his Federal tax. All other provinces, except Alberta, apply a higher income tax, so our calculation somewhat understates the typical worker's income tax payment.

Again it is the story of the "fallacy of composition". As long as everybody else is engaged in the self-defeating game of increasing their money incomes at an inflationary pace, each individual must do his or her best to keep up-to exhaust himself running to stay where he is, and he must wish his union to be as strong and disruptive as possible, as only thus can he hope to pull ahead of the pack. But we ought to be intelligent enough to use the institutions of big labour and big government to make collective bargains which are in our real interest, rather than destructive of these interests.

It is often said that Britain's present is Canada and the U. S.'s future. If so, it is a grim future. In no other country has the "normal" behaviour of labour unions been so destructive of the economy and of the long run interests of their own members. The British Trades Union Congress (TUC) has tremendous power over government and business in Britain. Now, this is not necessarily a bad thing, but what is bad is the stupidity with which they have used this power -- excessive wage hikes, resistence to modernization, and over-manning requirements have contributed to the slowest growth of real output, and investment, and the highest rate of inflation in the industrialized world. Suppose they used their power intelligently, however? Suppose just one of the top leaders of the TUC thought the whole s[illegible]tion through clearly, or read Turner, or me and that he addressed his mates somewhat as follows.

"Men, I'm tired of being stupid. Tired of leading my troops into a taxflation ambush time after time. Let's stop this game of knocking off one company at a time for higher wages which only lead to higher prices, higher taxes, the fall of the Pound, and lower employment. Let's organize for a general strike, so we can back Britain to the wall if we have to enforce our will!

Then let's demand the following of government and business. 1. We demand that you cut all wages and salaries, including the Prime Ministers, the Queen's Allowance etc., dividends etc., and other incomes, say 10%. 2. We demand that businesses cut prices by 10% plus the annual productivity gain, thus 13%. 3. We demand that the government not raise the tax rate, thus that our tax payments fall at least 2%. 4. We demand that the government stop preventing a return to full employment, that it consider whether further tax cuts might be made where they would do the most good in stimulating jobs producing real goods and services, not make work. Let society inscribe upon its banners, Cut the money wage! Raise the real wage! -10% - (-13% + -2%) = +5%!!!! Workers of the world, unite!! You have nothing to lose but your money illusion!!! You have a world to win!!!! ABC on D Day!!!!

Oratory aside, the benefits to Britain of adopting the program proposed by my mythical intelligent TUC leader are immediate and immense. Stagflation is ended and full employment is quickly restored. The Pound, from being a sick currency, rising now only because of north sea oil, would rise in value. British exports now so over priced, would be eagerly purchased by the benighted residents of less enlightened countries -- countries which hopefully would quickly follow England's lead into a full employment non-inflationary world. Interest rates, now kept so high by the expectation of continued inflation, and "tight" money to resist that inflation, would fall drastically, With stable prices, mortgage interest rates should fall to the 4% to 6% range we enjoyed in the 1940's. Low interest rates -- a major goal of Keynes', - but not Keynesians -- are important as society builds massive new capital projects to tap the power of the sun and the wind as the oil runs out. The money supply (whatever that is, M_1 M_2 ... M_n) could stop growing for a time (policy proposal (d)) or even shrink somewhat, thus saving much paper and ink, and making the monetarists happy. (Though I suppose they would use up all that paper and ink trying to prove that the fall of the price level was the effect of the fall of the money supply rather than its cause.)

The most difficult administrative problems are foreseeable regarding price cuts.

While the proposal is that all wage and non-wage personal incomes are to be cut by the same percent (say 10% for expository purposes), prices, on the average should fall by the wage cut plus the productivity gain (say 13%). Since most service activities are little blessed with productivity gains, their prices can fall by only the income cut without squeezing profit margins. Therefore, manufacturing and farm output, where productivity gains are concentrated, should fall by more than 13% in price so that the overall target can be met.

Furthermore, productivity gains are spread out throughout the year, rather than realizable on "D" (for deflation) Day. Therefore, on D Day, it might be legislated that all prices fall by at least 10%, while certain manufacturing goods and farm products are to fall by, say, 12%. (In the case of farm products it might be well to lower only the official support, or regulated prices by 12% while letting actual prices be influenced by market forces). In subsequent steps three or four months apart, manufactured goods in various sectors could be scheduled for further cuts. Corporations might be directed to lower the weighted average of their prices by, say, an additional 5% over the remainder of the year, the decision as to which prices to cut being up to them. This is similar to the directives under which the automobile companies are moving to increase the "fleet average" gas economy of their cars. In subsequent years the goal would be to maintain the average level of prices and it is here assumed that some variant of TIP ("carrot", "stick", etc.) would be sufficient if the rewards and penalties were adequately chosen.

Again, much will depend upon the course of the foreign exchange rate. If it moves upward only slowly the period after D Day would see a spurt in exports as the deflating country's goods can be sold for more outside its borders. If, as is assumed, the country has been in a net deficit position with heavy unemployment this surge in exports (and fall in imports) is all to the good in reducing or eliminating both problems while putting upward pressure on the exchange rate. As already stated, the course of capital flows is difficult to foresee -- the higher value of the deflating country's money tends toward international appreciation while its falling interest rates might induce capital flights and even some (perverse) depreciation during a "wait and see" period.

Limitations of the NRW Equation: Debt, Interest, and Expectations

If a 10 percent wage and non-wage reduction would do much good, would not a 20 or 30 percent reduction do that much more? Certainly, according to our $\widehat{NRW}$ equation it would, which points up important limitations of that equation. For small changes in the wage and price level, debt effects are not crucial. For large changes they are. Unless it is possible to index all debt contracts, the deflation our intelligent TUC leader is advocating will aid creditors and injure debtors. To some extent, the debtor and creditor are the same person at different points on his life cycle -- what he loses on his mortgage payment, he gains on his pension, but still the problem would become severe for large percentage changes in incomes and prices.

In 1976, the last year for which the *Economic Report of the President* supplies the figure, Net Public and Private Debt in the U.S. totalled \$3,355 billion, while GNP totalled \$1,700 billion.[7] Clearly the real cost of making contractual interest and principal repayments on this debt load rise if the price level is lowered. If all loan contracts were short term or renegotiable the transition would be easily weathered. However, many bond and mortgage contracts are of many years duration. For more than 40 years the course of the price level has been upward so that the real rate of interest has fallen short of the nominal rate. At the time of the "short sharp shock" envisioned above, the real rate of interest on existing debts will rise even as the nominal interest rate falls. In the subsequent period of stable prices the nominal and real interest rate must be kept as low as possible in order to promote growth. The result can only be a sharp rise the price of existing high interest rate debts and some capital gains to bondholders. For 40 years or more the shoe has been on the other foot, with negative real rates of interest in many years, and it is suggested that society honor all existing debt contracts in deflation as in inflation.

A further foreseeable consequence of the scenario here envisioned is a major fall in real estate prices -- a 13% fall in the all over price level leading to a fall in land and existing house prices by perhaps 25% or more. This shakeout is a necessary result of the reversal of the inflationary expectations which bid real estate prices to present levels and ultimately, when coupled with lower interest rates, will spark a revival of house building. However, the trauma to financial institutions will be great and since there is probably much truth to Hyman Minsky's "financial instability hypothesis"[8] it would be wise to be cautious here. It may be that a 13% deflation would be too strong a medicine to administer given the "fragility" of the current financial environment. Perhaps a cut half as big, if followed by an era of stable prices, would obtain all the benefits sought at lesser cost. The important thing, however, is to change peoples' present inflationary expectations to expectations of price stability and it is here argued that a mere price "freeze" will not do this.

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[7] By 1979 total indebtedness in the U.S. must exceed \$4 trillion but they quit publishing the figure. Why?

[8] See Hyman P. Minsky, "Financial Resources in a Fragile Financial Environment", *Challenge*, July/August 1975, pp. 6-13; ______, *John Maynard Keynes*, New York, Columbia University Press, 1975; _____, "The Financial Instability Hypothesis: An Interpretation of Keynes and an Alternative to 'Standard' Theory", *Challenge*, March/April 1977, pp. 20-27.

Figure 1 traces the history of the long and short run rate of interest in the U.S. from 1929 through 1978. Notable is the greater volatility of the short than the long rate and that it tends to approximate the long rate except in "abnormal" periods -- such as the Great Depression and WWII era when the short rate sagged far more than the long rate, and periods like the present where the short rate exceeds the long.[9]

The nominal rate of interest (short and long) is important to business costs and thus to the location of Keynes' Aggregate Supply Function.[10] However, it is the real rate of interest, and even more importantly the expected real rate of interest, which is important to decisions whether to

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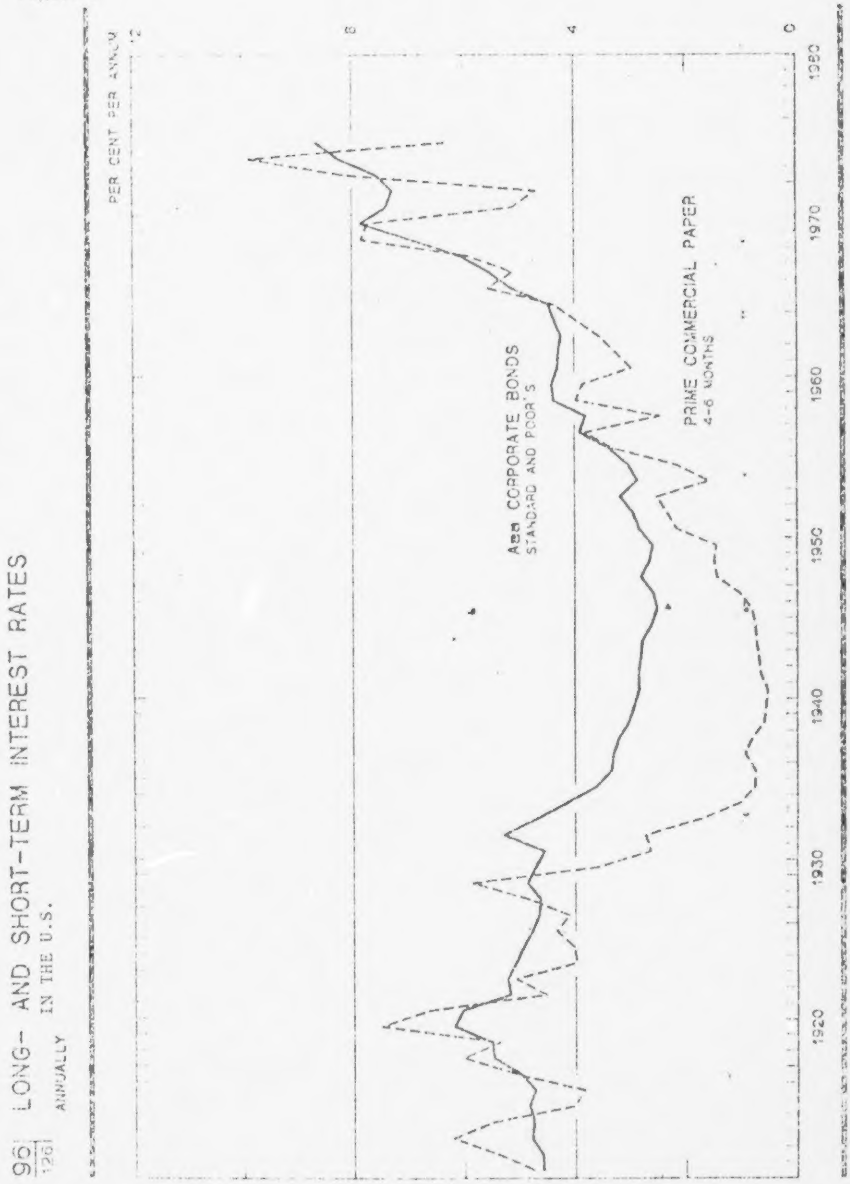
[9] Among the many defects of Hicks' IS = LM diagram, with which we have all been miseducated and in our turn have miseducated the young, is that it makes no distinction between "the" short and long rate. Clearly it is the long rate which is relevant to investment (and thus to the location of the IS line) while it is the short rate which can be affected by monetary policy and is thus relevant on the LM side. Keynes' "liquidity trap" argument -- that expansionary monetary policy might drive down the short rate but have little or no effect on the long rate on which recovery from depression depends - has been misunderstood and his proposed solution -- that the central bank tender a "complex offer ... to buy and sell at stated prices gilt edged bonds of all maturities" -- has not been carried out. (See Keynes, General Theory, p. 206.)

[10] Also much neglected by conventional theory. For some attention to interest cost see my, "Neo-Orthodox Keynesianism and the 45 Heresy", Nebraska Journal of Economics and Business, 6, (Autumn 1967), pp. 34-39; and my Stagflation and the Bastard Keynesians, Waterloo University Press, 1976, Chapters 5, 6, and 7.

Figure 1



Source: Board of Govenors of the Federal Reserve System Historical Chart Book, 1978.

(a) remain liquid or lend short or long term, (b) borrow to make real investments. It is not possible to study directly expected interest rates. However, in order to study the real rate of interest one need merely calculate the year to year change in the price level and add it to the nominal rate of interest in years in which the prive level fell and subtract it in years when the price level rose. Thus in 1932 the nominal short term rate of interest on prime commercial paper in the U.S. was .0264 and the price level fell in that year by .112. Thus the real short term rate was a large .1393 (.0264 + .1120). In 1942 the nominal short rate was only .0066 and the price level rose by .129. Thus the real short rate was minus .1224.[11] It very much paid to hoard money (if you had any) in 1932 -- you gained 11.2% on idle money. It did not pay to borrow money -- you had to pay back 13.9% more purchasing power than you borrowed. In 1942 it was just the other way round. It paid to borrow and spend rather than hoard - if you find anything on which to spend in WWII.

Figure 2 compares nominal and real short term interest rates from 1929 to 1978, while Figure 3 carries out the same comparison for the long term interest rate. Several points are of present concern.

(a) So long as the price level is falling sharply -- as it was from 1929 to 1933 -- (down some 23%) the short and long term rate of interest is very high. This consideration alone is sufficient to destroy the "Pigou" (and the "Keynes") effects of a falling price level. Investment would fall and people would hold back on consumption expenditures as long as falling

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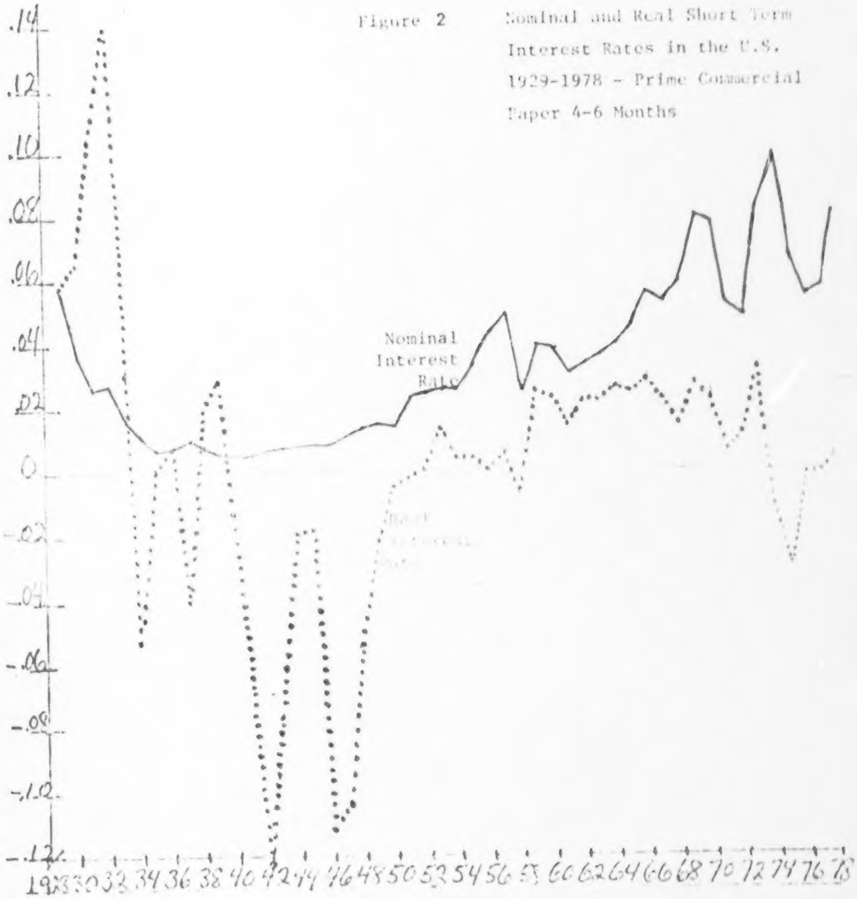
[11] Again we see how misleading is the IS = LM model. The diagram proports to be concerned with the real level of output and the real interest rate. The horizontal section of the LM function proports to trace the liquidity trap argument that the rate of interest cannot fall to zero. Clearly, however, the *real* rate of interest can, and often does, fall through zero to negative values. It is the nominal short term rate of interest which can only approach but never equal zero, and it is not the nominal rate that IS = LM proports to explain.

Figure 2 Nominal and Real Short Term Interest Rates in the U.S. 1929-1978 - Prime Commercial Paper 4-6 Months



Source: Economic Report of the President, January 1979.

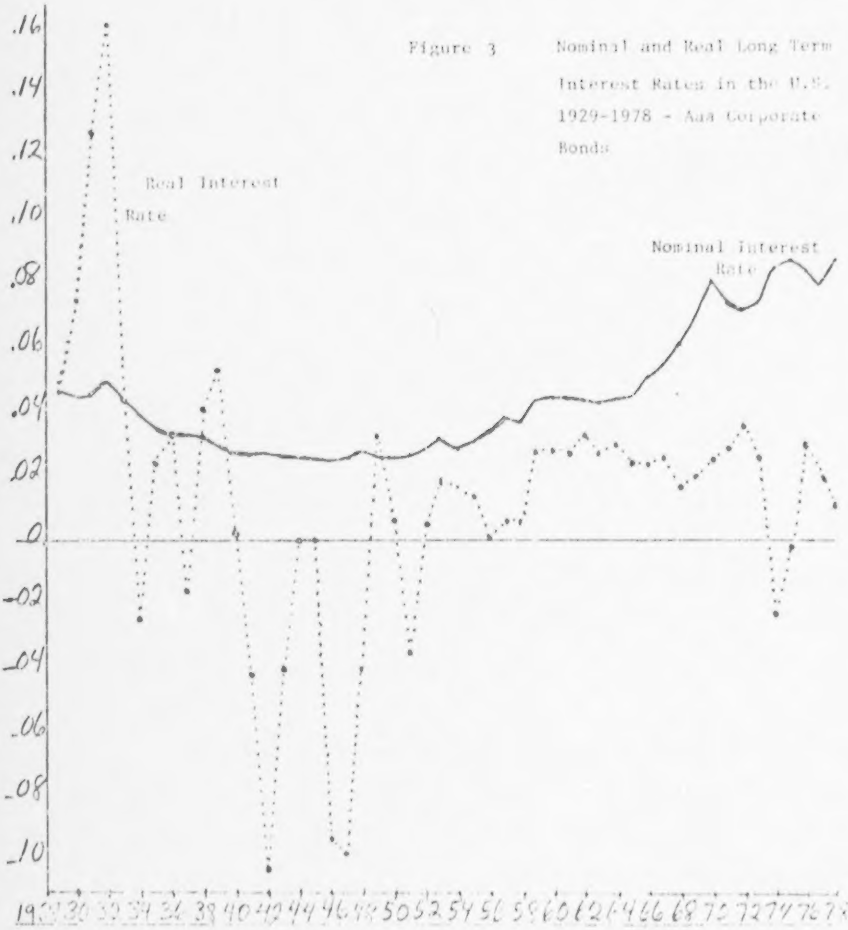


Figure 3 Nominal and Real Long Term Interest Rates in the U.S. 1929-1978 - Aaa Corporate Bonds

Source: Economic Report of the President, January 1979.

prices made such behaviour pay off and the depression would get worse, not be alleviated as Pigou, and to a lesser extent Keynes, believed. In terms of the usual diagrams, the IS and LM functions would shift upward and leftward, not downward and rightward as the textbooks have it. A falling price level is thus adverse to higher employment, while a fallen price level confers no particular advantage except when authorities have been "fighting" inflation by causing/permitting/not resisting unemployment. But this case is our present case, which the "short sharp shock" of one shot deflation seeks to cure.

(b) From 1933 to 1934 real rates of interest fell sharply as prices rose during deep depression (largely through the NRA codes, which may have been misguided, and which certainly demonstrate that "excess demand" need not be present for there to be price increases). The failure of the U.S. economy to expand more rapidly, particularly after the aggressively easy money policy of the 1938-40 period, demonstrated Keynes' point that open market policy, particulary if confined to the short end of the interest spectrum, is incapable of ending deep depression without the aid of fiscal policy.

(c) The real short term interest rate was negative in most years from 1934 through 1958, and the real long term rate averaged near zero over the same 25 year period. These negative to zero real interest rates contributed greatly to the recovery and after the war, the buoyant economy of these years. It is possible, but unproved, that a negative real rate (i.e., "unexpected inflation") is necessary to maintain near full employment given the "over savings" propensities of our society. At any event, the real rate of interest must be kept low for investment to be strong, as Keynes so vigourously maintained.

(d) The fact that lenders accepted negative or zero real rates of interest from 1934 to 1958 suggest that throughout this period the *expected* real rate of interest was higher than the *realized* rate of interest. That is to say, people expected inflation to end and fears of depression kept them from spending as freely as the objective situation warranted. The slowness with which expectations adapted to the reality of persistent slow inflation suggests strongly that monetarists are off on another wild goose chase with the present "rational expectations" literature. This literature seeks to demonstrate that participants in "the market" can foresee correctly the outcome of governmental fiscal, monetary and other policies, so that there is practically instantaneous adjustment to the new equilibrium. The history surveyed in Figures 1 through 3 would seem to indicate strongly that borrowers and lenders cannot foresee the future and continue for long periods to make contracts which are greatly injurious to one or the other party to the contract. This tendency for slow adjustment of expectations is relevant to the "radical" policies advocated here -- people may expect inflation to continue, or resume, and contract for unduly high real interest rates.

(e) The increasing nominal rates of interest in the past 20 years, and particularly in the past 10 years, as borrowers and lenders have come to expect continuing inflation and to allow for it, is itself one of the important causes of inflation. Economists have not focused upon this "cost push" aspect of rising interest rates because they have never integrated their theories "of interest as a production cost, as a return to the claimants of capital, and as a variable in monetary policy", as George Horwich put it.[12]

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[12] G. Horwich, "Tight Money, Monetary Restraint, and the Price Level", *Journal of Finance*, 21, March 1966, pp. 15-33. See my "Comment" and Horwich's "Reply" *Journal of Finance*, 26, March 1971, pp. 152-8.

If ever we are to obtain a stable price level with full employment, interest rates will have to fall drastically. The next section contains a "radical-conservative" proposal to obtain this end.

The "Tax-Bond" Proposal (e)

In two important, and too little read, books, William Krehm has traced much of the inflation, so called, of our present era to the disproportionate rise of the government sector and proposed the "Tax Bond" as a partial remedy.[13] At present the government approaches the corporate and individual citizen in one of two ways; either as a hard hearted, no nonsense tax-collector -- pay up or else; or as a soft spoken, pleading bond peddler. Krehm's "tax-bond" is a middle way, with important advantages over either extreme. Society's present investment in public structures, roads, education, etc. was largely financed on a "pay as you go basis" -- something no home owner or private business would do, and its rapid growth in recent decades has, in Krehm's view, contributed unnecessarily to the price rise. Krehm suggests that society borrow against this "hump" of assets while cutting current taxes to reverse the "shift and countershift" multipliers he sees at work raising the price level. He suggests the "forced-sale" of tax-bonds in lieu of taxes at below market rates of interest rates, to businesses and individuals. The argument recalls several of Keynes' points in *How to Pay for the War* regarding the differing morale and incentive, or "supply side" effects engendered by bonds and tax receipts. Keynes felt that if WWII were to be wholly tax financed the marginal rate of taxation on workers might become as high as 90% and that in consequence people would be unwilling to work overtime and weekends (except for emergency, patriotic reasons). He held, however, that people forced to save in the form of war bonds would be willing to work long hours and that the savings could be spent to maintain demand in the postwar period.

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[13] William Krehm, *Price in a Mixed Economy: Our Record of Disaster*, Thornwood, Toronto, 1975; *Babel's Tower: The Dynamics of Economic Breakdown*, Thornwood, Toronto, 1977.

Present circumstances differ greatly from wartime Britain yet the tax-bond has a useful role to play. The corporate liquidity squeeze would be much relieved by the gentler tax-bond way of finance, as the bonds could be sold (at a discount because of their low interest rate) to raise funds for expansion. Further, as the public debt is increasingly refinanced with ordinary business and households, the banking and insurance system would compete down the rate of interest charged private borrowers, setting in motion further forces to hold costs and prices down. Krehm suggests varying the coupon rate on tax-bonds, raising the rate when the economy is especially depressed to, say, 3 or 4% on the longest terms and lowering the rate, to say 2% on long terms when the economy is buoyant. The central point of the tax-bond, however, is that it is not sold to compete with other borrowers in the normal loan market. Being allowed to buy tax-bonds rather than be taxed is a valuable privilege, no matter how low the interest rate, as the tax-bond will ultimately be redeemed. Coupled with the incomes controls advocated in the earlier sections of this paper, the tax-bond can help finance a non-inflationary full employment world with interest rates at late 1930's through WWII levels.

Concluding Comments

This paper is already over long, and yet is is embarassingly sketchy regarding many questions. Nothing has been said regarding the longer run issues regarding TIP (f), slowing down the growth of government (g) and regarding "self inflicted wounds" (h). However, much has been written on these matters elsewhere by others. Here suffice it to say that if the "tax-bond" is merely used as a less painful way of financing a continuing disproportionate growth of public sector spending its net impact will be inflationary, rather than deflationary. Much could also be said regarding the desireability of cutting top salaries by more than the average percent (because such persons will also get the biggest tax break) or cutting the minimum wage and unemployment compensation by more than the standard percent (to "tilt" the margin in favor of work rather than welfare). However, perfect justice forever eludes and a uniform percentage would seem much easier to enact and to police. For now, however, it is only the main point I want to stress -- stagflation can be ended, and quickly, by an across the board wage and non-wage income and price cut, and then we could get to work trying to solve the really difficult problems.

What is the likelihood that some country will give it a try? This is a world of instant communication and rapid change. If we had been told a few years ago that people would quickly stop using aerosol sprays because of a remote threat to the upper atmosphere; if we had been told the U.S. would give up on building a supersonic transport just because it is noisy, dirty, uneconomic, and also treatens the ozone layer, I dare say most of us would hardly believe it. If I had been told a decade ago that a few years after the introduction of the pill and easier abortion, the U.S. and Canadian birthrate would fall below net reproduction, so that eventual depopulation, rather than the population explosion becomes the new threat, I would have been skeptical. If you told me ten years ago that my sons would soon be wearing their hair longer than my daughters ... !

These are rapidly changing times. People can adapt quickly to all kinds of "unlikely" or even "impossible" appearing things. And then after the change some wise fellow will come forward to show it was "inevitable". Should England try the above proposed scenario? Or Canada pioneer?[14] Why not? The difficulties, federal-provincial separation or powers, Quebec, and all, are great. But so is the need. We have the highest rate of unemployment in the "high income" world. The one thing other countries should not do is wait around for the United States to take the lead. Based on past performance the U.S. is the last country on earth to try anything new and useful in the socio-economic realm. Even with Hitler, it took three years of World War to get them up to full employment.

But somewhere, soon, it is not impossible that some top labour leader will say to his fellows, "Men, I'm tired of being stupid ... Now let's get organized to really help our men!" Or some top political leader may use his Anti-inflation Board to stop and reverse inflation in one step.[15] And after it was all over some pundit will say, "Of course, only sensible thing to do! Inevitable!"

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[14] For some worthy Canadian pioneering regarding detaxation and charging for government services see Richard Bird, Charging For Public Services: A New Look at an Old Idea, Toronto: Canadian Tax Foundation, 1976, and A. R. Bailey and D. G. Hull, A More Revenue Dependent Public Sector, Supply and Services Canada, Hull, 1979.

[15] Indeed, as the attached newspaper article makes evident, Switzerland has already had the wit to use its special circumstances to opt out of stagflation. Those who merely throw up their hands and cry "OPEC!" when it is suggested that stagflation can be ended should remember that Switzerland has no oil and very little coal.

WORLDWIDE

Swiss near to mastering their inflation but currency pressure could hit exports

By Robert Hutchison

ZURICH

SWITZERLAND could have a negative inflation rate by next month, according to Hans Mast, one of the country's leading economists.

Cheaper Swiss imports brought about by a fast appreciating franc have helped achieve this unusual economic feat. But Mast, a vice president of Credit Suisse, the country's third largest bank, believes there's a more decisive factor: mortgage rates.

Rents make up 30% of the Swiss cost-of-living index so a recent drop in mortgage rates should lower rents and the index.

"We've beaten inflation," he said confidently in a recent interview at Credit Suisse's neo baroque headquarters here.

Switzerland will achieve a major economic triumph if it has zero inflation, let alone a negative rate, through conservative economic policies with a big assist from currency appreciation. It will be the first Western country in 25 years to master inflation.

But "negative inflation," as Mast prefers to call it, could bring with it another set of dangers, including increased upward pressure on the nation's currency. The franc's extraordinary robustness is already a burden to exporters and the tourist industry.

Nevertheless, Mast believes the negative side-effects are liable to be neutralized by a range of factors peculiarly Swiss.

He cites the sensible attitude of Swiss workers in negotiating new contracts, management's willingness to talk out their problems with labor and a sober accounting system that has meant large reserves available for research and development.

Clearly, Switzerland's export-geared economy has suffered from a high franc and would suffer even more if the franc were to take off again.

But Mast argues that during the past five years monetary fluctuations have been less drastic for Swiss industry than they appear.

Since the Smithsonian currency agreement of December, 1973 the nominal revaluation of the Swiss franc against an export weighted basket of major currencies has been about 100%.

However, if allowance is made for inflation, it's closer to 50%. Considering the Swiss franc was probably undervalued in the early 1970s the revaluation in real terms is somewhere between 30% to 35%.

This, Mast insists, is a level that Swiss industry can live with so the economy has adapted surprisingly well. Labor has not opposed the structural changes and has accepted the introduction of new technology.

Dominant

The watch industry is one striking example. Considered moribund a few years ago, it has become less labor-intensive, more technology-oriented and is well on the way to attaining a substantial, even dominating position in the electronic watch field.

"Our labor force knows they are dependent on export industries for their well-being. They have formulated their demands knowing they must continue to export in order to survive," Mast explained.

By contrast he finds Canadian labor "spends a good deal of time looking at what U.S. labor is getting and demanding as much, if not more. This is not an environment for expansion."

In Switzerland Mast feels the declining rate of inflation — it has been under 1% for the past year — has helped promote social stability. "Inflation is an unjust tax, a cause for social unrest," he says.

Squeezing inflation out of the Swiss economy could only be achieved by large scale reduction of foreign workers, a safety valve that the federal government has not hesitated to exploit.

Since 1973, industrial production has increased only fractionally but employment has dropped by 20%, resulting in higher productivity.

And still there is no unemployment to speak of (contracts of seasonal workers were not renewed, forcing them to return to Italy and elsewhere) though several recent industrial bankruptcies have caused alarm.

Switzerland is not a protectionist country so it has been coping with the vagaries of free trade for generations. Industry is highly specialized and consequently, a demand for many Swiss products will exist no matter how the franc soars.

Explains Mast: "Swiss industry is not all that energy and raw material oriented. It is technology-intensive. Per tonnage of goods exported, the value of Swiss exports is six times higher than West Germany

"We have invested heavily in new technology over the past decade. A major difference between us and Canada is that Canadian exports are still raw-material oriented. This is not very interesting for a high-wage country," he noted.

Another advantage of social stability is Swiss industry's ability to enter into long-term trade deals without the protection of elastic escape or escalation clauses. Exporters can promise delivery for 10 a.m. on August 1, 1985, and produce the goods exactly on schedule at the contracted price. "Not even the Germans can do that," says Mast.

Moreover, industry is bolstered by a prime 4.5% borrowing rate and an abundance of long-term export credits at attractive fixed-interest rates.

While inflation will continue to decline in Switzerland, Mast sees little chance of the same successes being reproduced in North America.

"As opposed to Canada and the U.S., we never believed that monetary stimulus creates employment. This is a pure Keynesian approach. The Swiss are much more orthodox," he said.

However Mast does see problems appearing for the Swiss in the second half of the year. After starting strongly, the Swiss gross national product is not expected to match last year's growth rate of 3.5% -- one of the highest in Europe.

More bankruptcies and higher unemployment (currently under 1% of the workforce are a distinct probability.

SOME ASPECTS OF INTEREST AND REAGANOMICS

by

William F. Hixson

For Presentation at the Eastern Economic Association Meetings
the the Capital Hilton, Washington, D. C. Friday April 30, 1982

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SOME ASPECTS OF INTEREST AND REAGANOMICS

by William F. Hixson

I

The political crisis in Poland which has been so much in the news headlines of late has been paralleled by a financial crisis. In addition to all its troubles with the Solidarity movement at home, the Polish government has had problems with bankers abroad. Poland is not only unable to meet its debt repayment obligations, it is unable even to borrow enough to pay interest due. Nor is Poland the only country in the world with such a problem; there are many countries with an external debt so large and an annual interest burden so oppressive that they avoid being declared bankrupt only because they are able to arrange new loans with which to pay interest on previous loans. This they are able to do because the creditor banks feel compelled at any cost to prevent an open default---a default which would destroy the myth that their earlier loans are assets.

My reason for repeating what is common knowledge about the propensity of foreign countries to avoid bankruptcy by borrowing to pay interest is that it provides an introduction for a less commonly acknowledged fact, namely, that borrowing to pay interest has become a way of life for the private sector of the United States economy as well. Before setting out in earnest to support this statement, however, I wish to cite a few other background facts about debt and interest in this country.

Item 1. In 1972 the consumption of petroleum in the United States amounted to six billion barrels at $3.39 per barrel for a total of $20.3 billion. In 1981 at $37.00 per barrel the cost of six billion barrels was $222.0 billion. The oil bill thus increased about $200 billion in nine years.[1] There is general agreement that everyone who could do so passed on the increased petroleum cost in the form of higher prices and that the net effect of higher oil prices has been higher prices for almost everything. "There is no doubt," says a report of the Joint Economic Committee of Congress, "that if...in the 1970s...oil prices (had remained) reasonably stable, inflation would have been much lower".[2]

In 1972 the average rate of interest on the total private plus government debt in this country was 6%. By 1981 this average had risen to 10% and because of the higher interest rates Americans paid $225 billion more interest in 1981 than they would have paid had the 1972 rates prevailed.[3] Everyone who could surely passed on the increased interest cost in the form of higher prices and surely the net effect of the greater interest burden has been higher prices for almost everything. Strangely, the Joint Economic Committee has not one word to say about increased interest burden as a cause of inflation.

The economic devastation wrought by the $200 billion oil rip-off---by no means solely a domestic matter---has evoked demands for excess-profits taxes and even evoked calls for the nationalization of oil reserves. It is interesting and quite curious that the equally great devastation wrought by the $200 billion interest rip-off---almost entirely a domestic matter---has resulted in no comparable calls for excess-interest taxes or for the nationalization of credit reserves.

Item 2. From 1980 to 1981 the "wage bill" portion of National Income increased 11%---only ½ of 1% faster than total National

Income. Over the same period, the interest portion of National Income increased 19½% or 9% faster than the total.[4] Nevertheless everyone talks about inflation being caused by increases in wages in excess of increases in the productivity of labor and virtually no-one talks about the fact that there has been no measurable increase in the productivity of borrowed money to justify the huge increases in the cost of borrowed money.

Item 3. Alan Greenspan is hardly an alarmist by any definition yet in the Mar-Apl 1980 issue of Challenge he wrote as follows:

> ...the total interest and scheduled amortization payments on both mortgage and installment debt currently accounts for 28 percent of cash disposable personal income... Moreover, nearly one-fifth of all American families owe no debt at all at this time. Consequently, the four-fifths of families who are debtors must be allocating roughly 35 percent of their cash disposable income for debt service payments. If the average of debtors is that high, a substantial portion of households must surely be committing closer to 50 percent of their monthly paychecks to debt service.

We may safely assume that a considerable number of the households with half their paychecks going to pay debt service were either unable or unwilling to live on the remainder and that they increased their spending on goods and services by such expedients as "consolidation" loans, second mortgages, and the like, that is, that in effect they borrowed to pay interest.

Irving Fisher's favorite word for describing the condition of our economy in 1929 was "overindebtedness".[5] My purpose here is to show that once again overindebtedness is, or at any rate, should be, a matter of first concern. Further, that when our basic problem is taken to be inflation or stagflation rather than overindebtedness, the result is much mis-directed and unrewarding research.

PART II

The best way to get to the heart of the cause of our current economic malaise is by consideration of the ratio of private sector borrowing, or what I prefer to call, Private Deficit Spending (PDS) to Private Debt Interest (PDI). "Private Sector" as used here refers to the investment sub-sector as well as the consumer sub-sector. There may be a better way than the PDS/PDI ratio to bring into sharp focus just what has gone wrong with this economy but it has not come to my attention.

Table I shows six periods of one to four years in length and, for each period, the average annual PDS and PDI. It shows as well the PDS/PDI ratio and finally the compound per annum growth rate of Real Gross National Product (RGNP).

Table I[6]

Period (inclusive)	No. Years	PDS	PDI	PDS/PDI	RGNP
		(billions	current $)		
1967-69	3	99.6	68.8	144.8%	+3.37%
1970	1	85.3	90.8	93.9	- .18
1971-73	3	179.8	113.7	158.1	+4.95
1974-75	2	116.9	170.0	68.8	- .84
1976-79	4	343.7	241.3	142.4	+4.70
1980	1	315.5	385.0	81.9	- .16

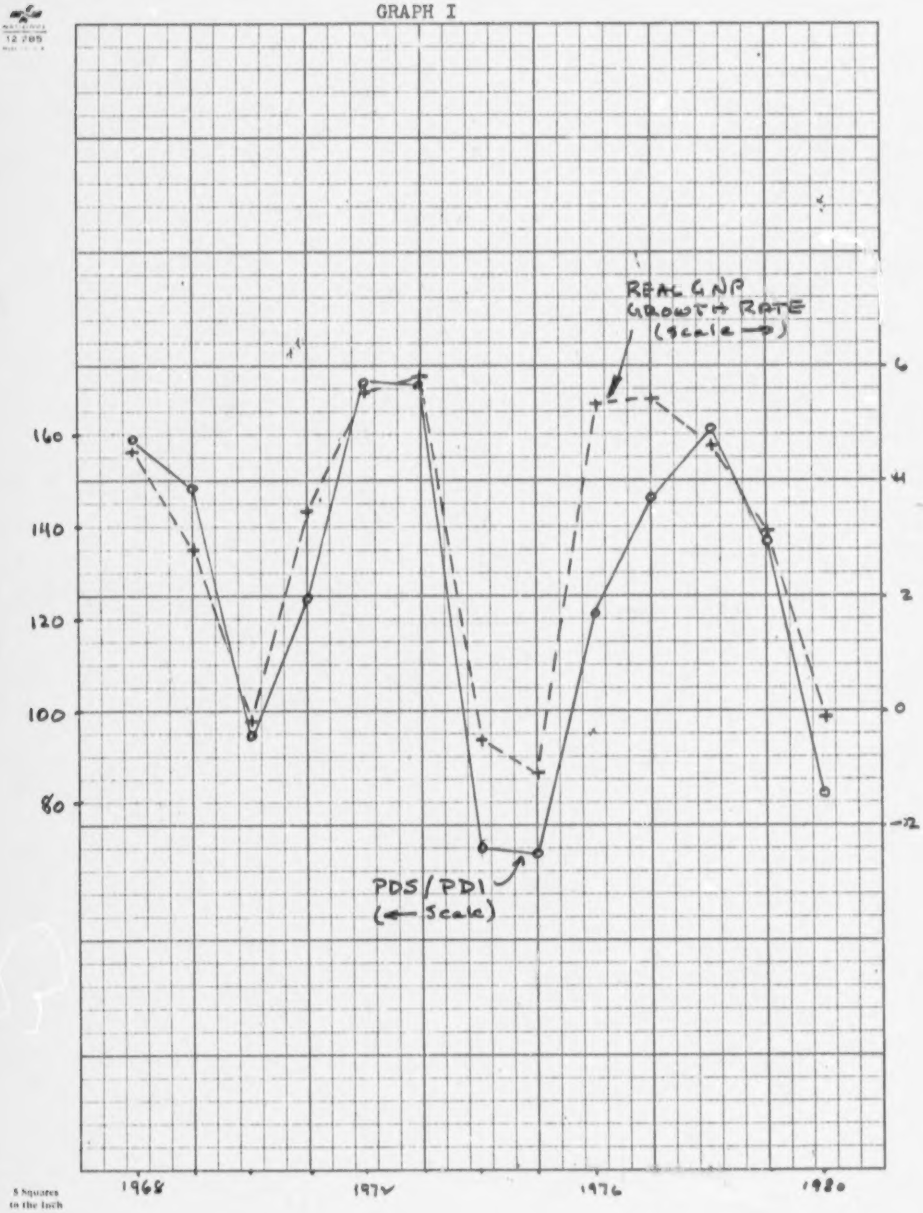
Note from Table I that in the first, third, and fifth periods (which were periods of RGNP growth) the PDS/PDI ratio was between 140 and 160 percent while during the second, fourth, and sixth periods (periods of RGNP decline) the ratio was between 68 and 94 percent. What is evident is that when 40 to 60 percent more than enough to pay interest was borrowed by the private sector, the economy prospered, but that when less than enough to pay interest was borrowed, a recession ensued. In other words, all of our troubles are not due to an out of balance federal budget and the private sector of the economy is nearly as bankrupt as Poland.

The patent and perhaps somewhat startling showing of Table I is not the result of averaging or other clever manipulation of the data as Graph I shows. The graph provides curves for the PDS/PDI ratio and for the RGNP growth rate for years 1968-80 and demonstrates that even on an annual basis there is a close correlation between the cyclical fluctuations in the two curves. We shall see later that there is an even closer correlation between the RGNP curve and the ratio of Total (government + private) Deficit Spending(TDS) to Total Debt Interest (TDI) but the PDS/PDI ratio deserves further attention before we turn to TDS/TDI.

The fluctuations of PDS/PDI over a more extended time period---1947-80---is shown by Graph II. Because the curves overlap in such a way to confuse, no RGNP curve has been shown but note that the low points on the PDS/PDI curve reading from left to right correspond to the slump of 1949, the recessions of 1954 and 1958, the mini-recession of 1960, the "credit crunch" of 1966-67, and the recessions of 1970, 1974-75, and 1980. Note especially the general downtrend of the curve. This shows how our present troubles have slowly but inexorably developed over a period of three decades.

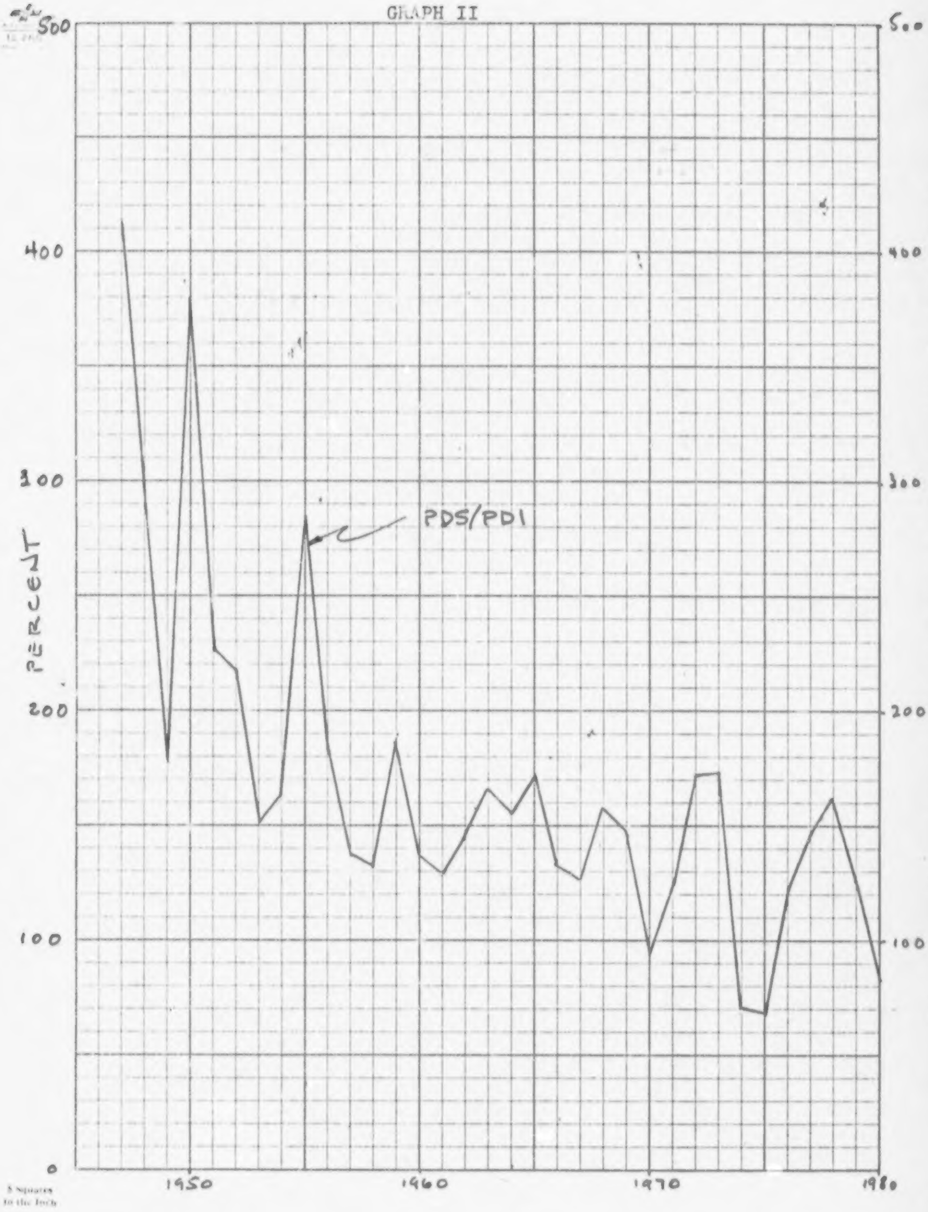
A declining PDS/PDI curve is, above all, indicative of the fact that the private sector is finding it increasingly difficult to borrow enough to pay its interest burden despite the herculean efforts of the federal government to facilitate the process by

GRAPH I



REAL GNP GROWTH RATE (scale →)
PDS / PDI (← scale)
160
140
120
100
80
6
4
2
0
-2
1968
1972
1976
1980
5 Squares to the Inch
12 785

GRAPH II



500
400
300
200
100
0
PERCENT
PDS/PDI
1950
1960
1970
1980
500
400
300
200
100
5 Squares to the Inch

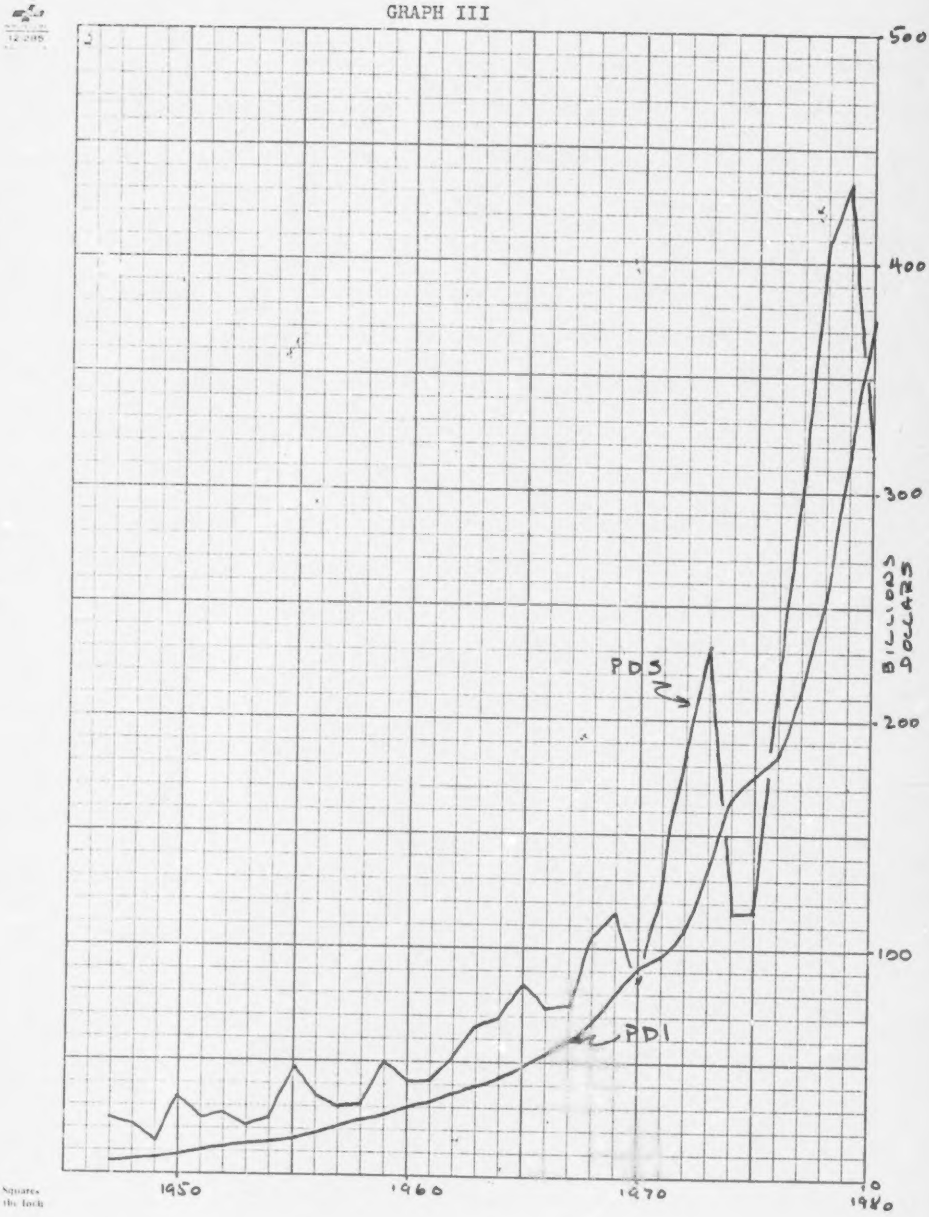
loan-guarantees, interest-rate-subsidies, tax-cuts, panic orders for poorly planned military hardware, import-export-subsidies, and expansion of the money supply at such a rate as to permit private debt to increase more from 1973 to 1980 than from 1789 to 1973.

What is shown by the declining PDS/PDI curve of Graph II may be shown in another way by Graph III which shows curves for PDS and PDI. Everyone knows how a given sum increases at compound interest but when not only is enough borrowed to pay interest but an additional amount borrowed to keep the economy growing and when, on top of all this, the rate of interest increases secularly, then the rate of growth of interest burden can only be described as fantastic. As Graph III shows, from 1946 to 1980 the private sector interest burden increased 75 times. Meanwhile the income out of which this interest had to be paid---$GNP---increased only 12½ times and RGNP only 3 times.

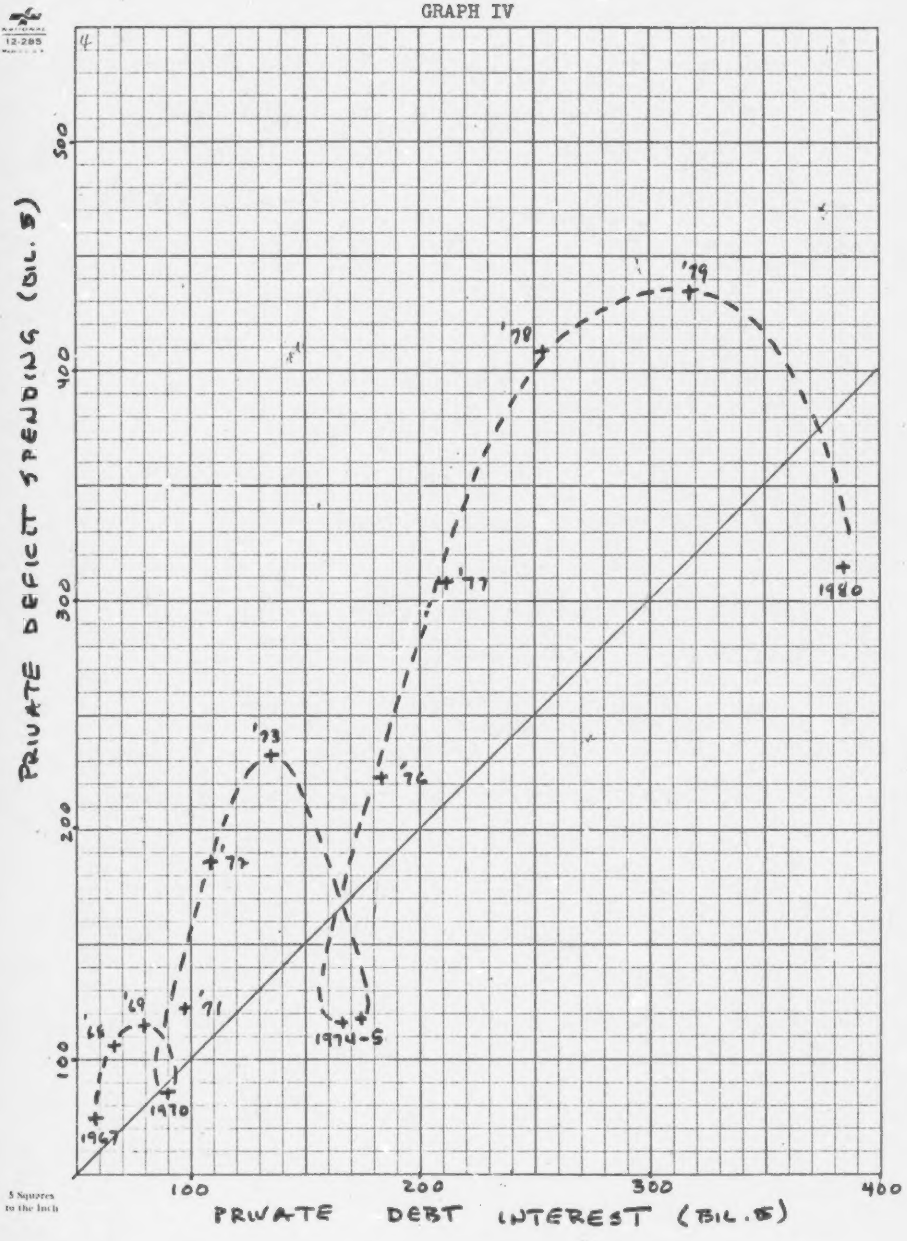
Graph III shows that the more the private sector borrows, the more interest it has to pay, and the more interest it has to pay the more it has to borrow to pay the interest and keep the economy above the recession level. Behind all the other more talked-about spirals of this gyrating out of control economy is the PDI-PDS-PDI amplifying-feedback spiral.

If only minor artistic liberties are taken this spiral can be shown as by Graph IV. This graph plots PDI in billions of current dollars on the horizontal scale and PDS in the same units on the vertical scale. Points corresponding to the PDS and PDI values of each year from 1967 to 1980 are marked and labeled and then connected by the dashed spiraling curve. A

GRAPH III


PDS
PDI
500
400
300
BILLIONS DOLLARS
200
100
0
1950
1960
1970
1980
Squares the Inch

GRAPH IV


4
PRIVATE DEFICIT SPENDING (BIL. $)
500
400
300
200
100
'79
'78
'77
1980
'73
'72
'76
'69
'68
'71
1974-5
1970
1967
100
200
300
400
PRIVATE DEBT INTEREST (BIL. $)
5 Squares to the Inch

faint line at 45° represents PDS/PDI = 100%. "Credit crunch" year 1967 is barely above the line and recession years 1970, 1974-75, and 1980 are below the line. The 45° line more or less corresponds to the secular trend of the ratio.

As mentioned above a key factor in the rapid growth of PDI and hence of PDS has been an increase in the average Private Debt Interest Rate (PDIR)---it has nearly tripled since the end of World War II.[6] It is customary to blame high interest rates almost entirely on high rates of inflation but this is a gross oversimplification. There is another hypothesis, one usually ignored but nevertheless one deserving of more attention than economists generally accord it, namely, that it is the increasing shakiness of the private debt structure and the increasing awareness on the part of creditors of the nearly hopeless state of affairs which drives up interest rates. "The relationship between interest rates and risk...lies at the heart of the banker's art."[7] This is especially true of long term interest rates. When higher risk pushes up interest rates, the interest burden increases accordingly, and, when all debtors in a position to do so, pass on this higher interest burden in the form of higher prices, it is the inflation rate which goes up because of higher interest rates, as well as vice versa.

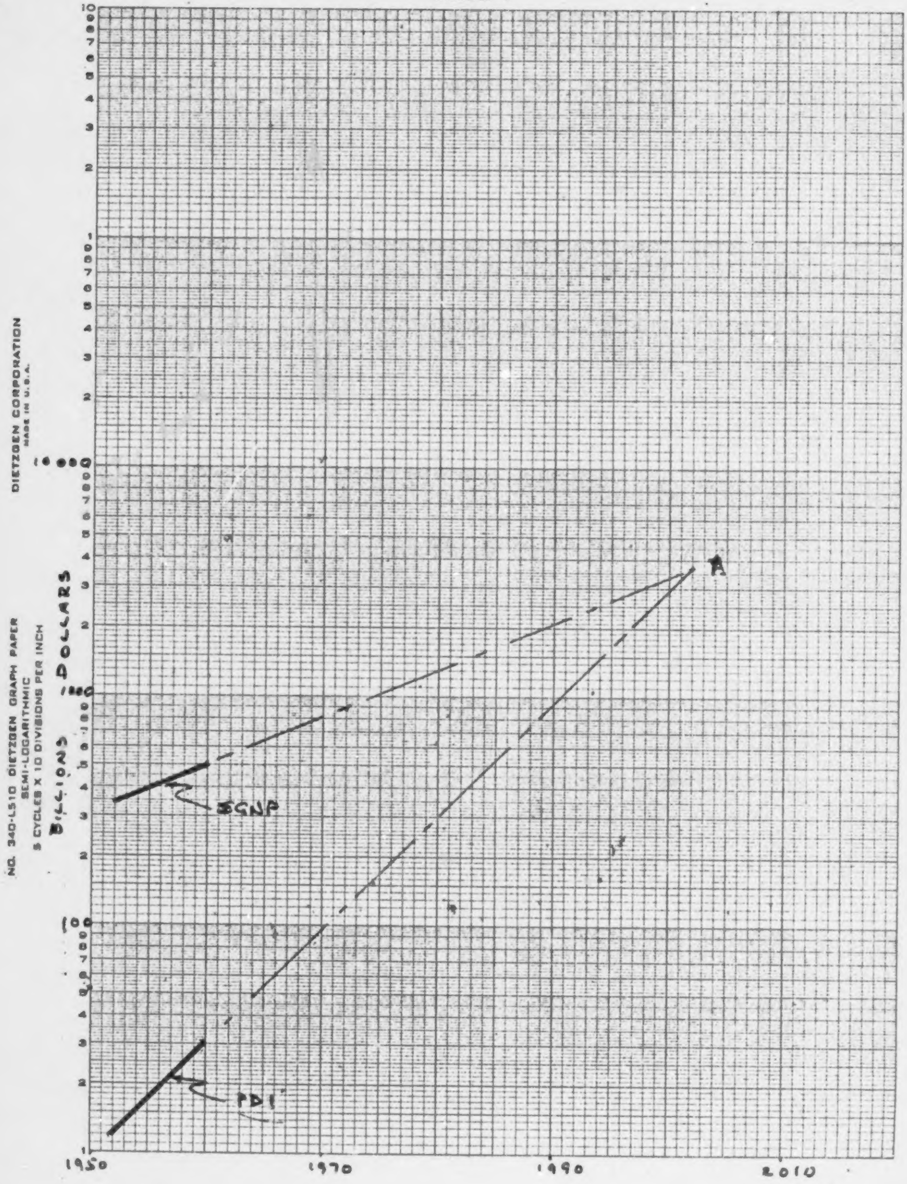
I am, of course, not contending that the passing on of interest burden in the form of higher prices is the only cost-push factor in the inflation of the past decade nor that such inflation could have been sustained without constant increases in the money supply. What I do contend is that interest-push is an extremely important---increasingly important---albeit seldom emphasized factor and that just as interest rates tend to increase with inflation rates, inflation rates tend to increase because of interest rate increases.

Although intuitively we all know that "borrowing to pay interest" by the private sector is a process which must necessarily eventually terminate, it is desirable to approach the matter analytically as well. To this end, let us now consider Graphs V and VI. The first of these graphs shows by heavy solid lines how $GNP and PDI increased during the eight years of the Eisenhower Administration, that is, from 1952 to 1960. The faint dashed lines of the graph show a projection of the 1952-60 growth to intersection at point A in year 2002. What this graph tells us is that as early as 1960 it was obvious the system could not continue to function as over the previous eight years without a breakdown sometime before 1990 when it would take an impossible 50 percent of $GNP to pay the private debt interest burden.

It is vital to understand that long before the Vietnam War, The Great Society, EPA, CPA, OSHA, the decline in the growth rate of labor productivity, before OPEC---before any of the factors on which our present crisis is usually blamed---it was obvious that eventually the differential between the growth rate of $GNP and PDI was bound to produce a profound crisis. It was also obvious that if the growth rate of PDI was to be sustained even a matter of decades this would only be possible by borrowing to pay interest and thus inflating income or $GNP. That this is precisely what happened and how it happened is shown by Graph VI.

5

GRAPH V


Billions - Dollars
100
10 0
$GNP
PDI
A
1950
1970
1990
2010
DIETZGEN CORPORATION
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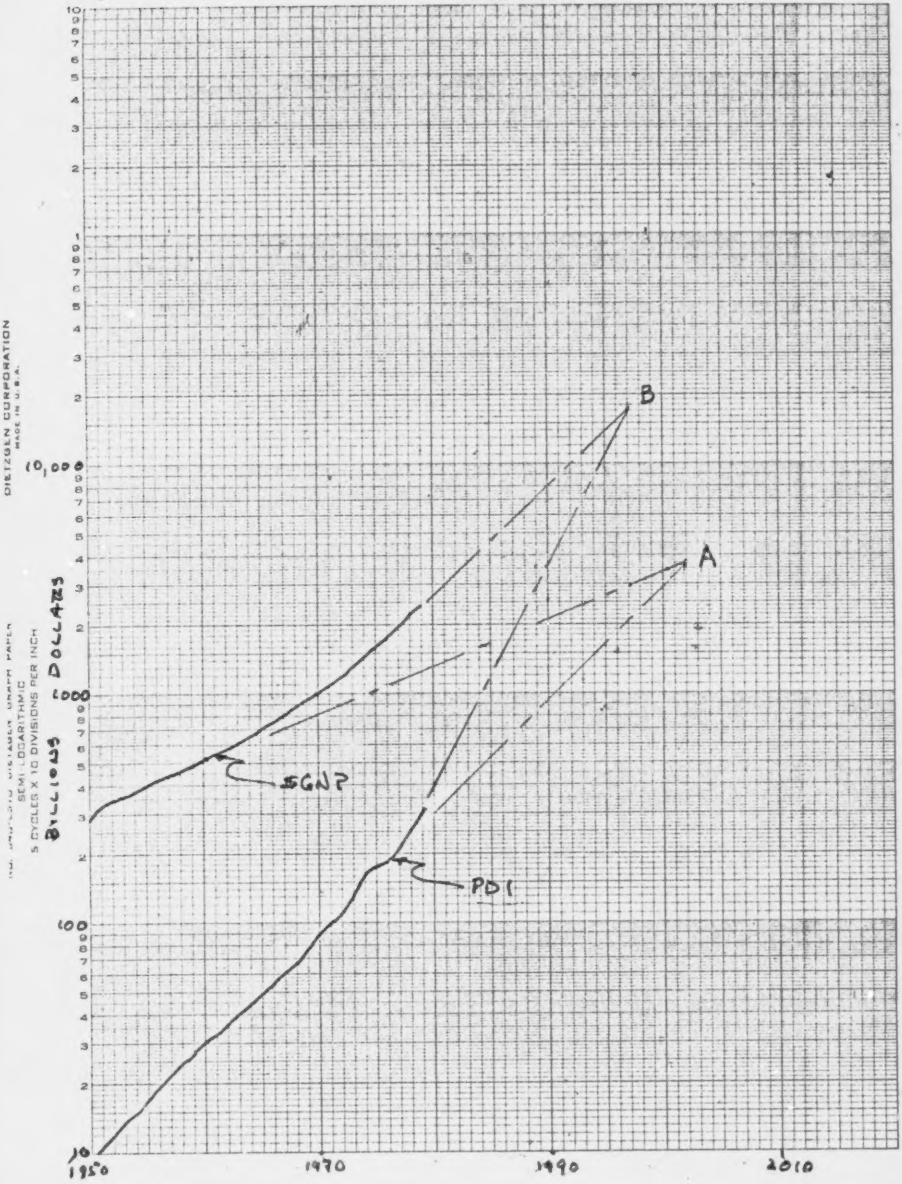
SEMI-LOGARITHMIC
5 CYCLES X 10 DIVISIONS PER INCH

Graph VI shows curves for the actual growth of $GNP and PDI from 1950 to 1979 in solid lines. It shows also the same dashed lines as Graph V converging on point A. It shows as well a dashed line projection of the growth of $GNP and PDI from 1978 to 1979 intersecting at point B in 1997---five years earlier than the 1952-60 projection. Whatever merit there may be in the argument that debt can be "inflated away" there is obviously no merit whatever in the suggestion that interest burden can be so easily banished. It is interesting to calculate that at point B in 1997 PDI would equal over $17 trillion or 6½ times the 1980 $GNP and even that utterly incredible amount of inflation would be to no avail.

6

GRAPH VI


DIETZGEN CORPORATION
MADE IN U.S.A.
NO. 340-L510 DIETZGEN GRAPH PAPER
SEMI-LOGARITHMIC
5 CYCLES X 10 DIVISIONS PER INCH
BILLIONS DOLLARS
10,000
1000
100
10
1950
1970
1990
2010
B
A
$GNP
PDI

Part III

While the overall picture sketched in Part II concerns only the private sector it, nevertheless, offers a very good first approximation of what is true of the total economy. If government is brought into the picture and we consider the TDS/TDI ratio instead of PDS/PDI less is changed than might be supposed. This is shown by Table II, the counterpart of Table I except that PDS/PDI has been brought forward from Table I for direct comparison to TDS/TDI.

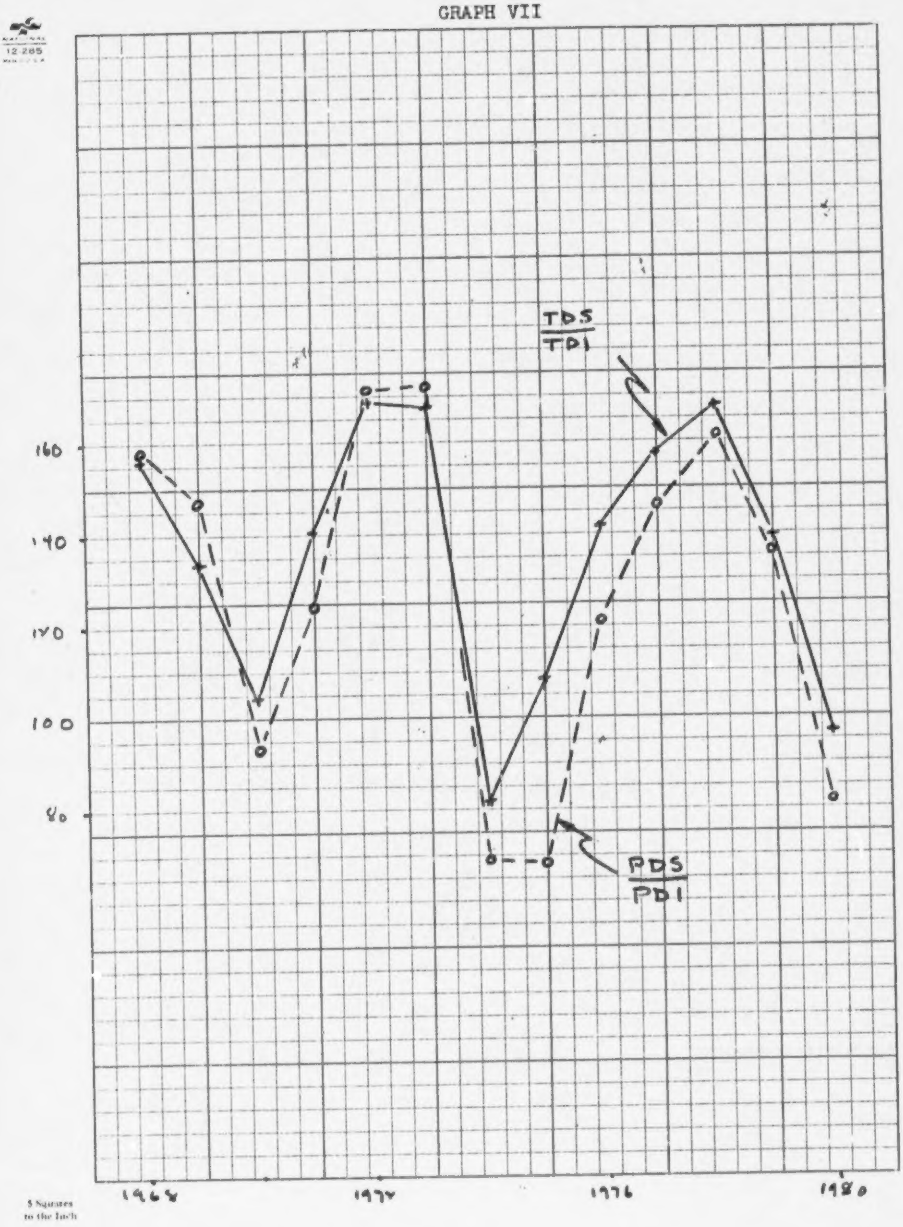
Table II

Period (Inclusive)	No. Years	TDS (billions current $)	TDI (billions current $)	TDS/TDI	PDS/PDI
1967-69	3	120.9	86.6	139.6%	144.8%
1970	1	118.4	112.9	104.9	93.9
1971-73	3	223.0	139.2	160.2	158.1
1974-75	2	196.6	205.8	95.5	68.2
1976-79	4	450.4	296.8	151.8	142.4
1980	1	464.6	478.0	97.2	81.9

Just as in the case of PDS/PDI, only when TDS/TDI is substantially above 100% does the country enjoy prosperity. The effect of government deficit spending is most obvious in the difference between the ratios during the recession years. The policies of the government have been significantly contra-cyclical during recessions as, of course, has been intended.

Graph VII shows curves for TDS/TDI and PDS/PDI for years 1967-80. The general shape and proportions of the curves are clearly similar. Another way of showing that the conclusions reached on the basis of considering the private sector alone are substantially the same as the conclusions which follow from considering the total economy is Graph VIII. Here is shown curves for growth of TDI and $GNP for 1950-79, projections

GRAPH VII


TDS
TDI
PDS
PDI
160
140
120
100
80
1968
1972
1976
1980
5 Squares to the Inch

of 1952-60 growth to point A', and projections of 1978-79 growth to point B'. Point A' falls in 2008 compared to 2002 for point A on Graph VI. B' falls in 1996 compared to 1997 for point B on Graph VI. Thus, so far as years 1950-79 are concerned, essentially the same conclusions follow whether we concern ourselves with TDS/TDI or PDS/PDI.

For other years, for years of war or depression in particular, PDS/PDI is less significant than TDS/TDI because of the far greater federal deficit spending in such years. Graph IX shows a TDS/TDI curve for years 1917-1980. This is a highly significant curve and the following in particular should be noted:

1. The curve begins at the left with the ratio very high due primarily to World War I spending.

2. The war was followed by a deep, short depression in 1921 and the TDS/TDI ratio dropped far below 100%.

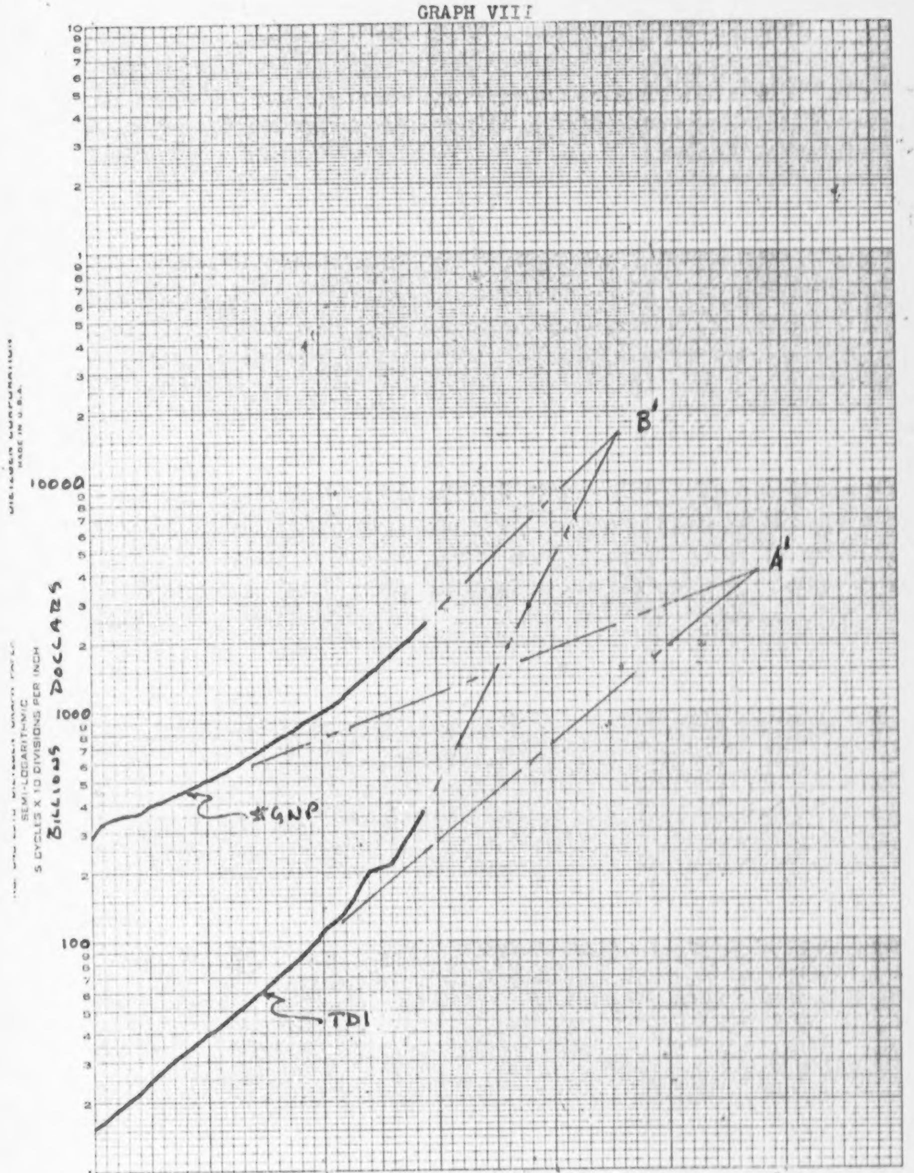
3. The ratio was near 100% during the boom years of the twenties due almost entirely to private deficit spending. The federal debt actually declined throughout the twenties.

4. From 1930-34 TDS was negative, that is, more debt was either paid-off or cancelled by bankruptcies, mostly the latter, than money was borrowed. The bankruptcies, of course, were in the private sector. A government never goes broke in the same sense as a private enterprise. TDS was negative again in 1938 and 1946.

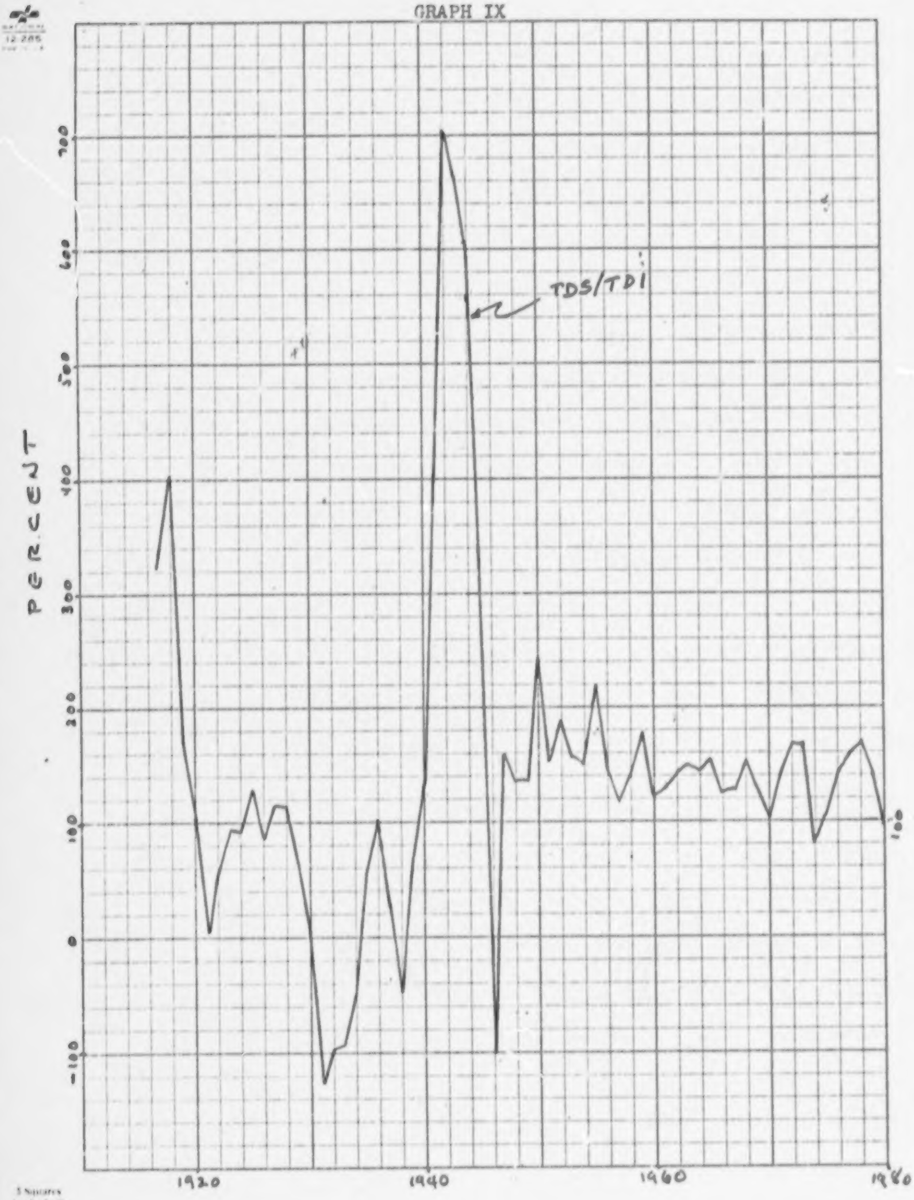
5. For 1941-44 federal deficit spending set new all-time highs and so did TDS/TDI and RGNP.

6. Since 1946 "the mixed economy" has been far more carefully controlled than during the earlier years and TDS/TDI has been

GRAPH VIII


B'
A'
$GNP
TDI
BILLIONS DOLLARS
10000
1000
100
1950
1970
1990
2010
SEMI-LOGARITHMIC
5 CYCLES X 10 DIVISIONS PER INCH
MADE IN U.S.A.

GRAPH IX



5 Squares to the Inch

held within a comparatively narrow range. Nevertheless, note the steady downtrend in TDS/TDI and compare with the downtrend of PDS/PDI shown by Graph II.

The close correlation between the growth of the economy in real terms and the degree to which the TDS/TDI ratio exceeds 100% is evident from Graph IX but is a matter of such importance Table III has been prepared as a supplement to the graph. Table III will be considered self-explanatory except that two general observations beg to be made. First, that the cause of the Great Depression was that for whatever reason borrowers were unable or unwilling to borrow and lenders were unable or unwilling to lend in such a way that TDS could exceed TDI. Second, that what ended the Great Depression was not, as is so often said, "the war", but federal deficit spending for the war. There is every reason to suppose that deficit spending, federal or otherwise, for any purpose whatever, so long as it materially exceeded TDI would have ended the depression.

The time-honored mechanism for bringing an out-of-control interest burden back to tolerable proportions is a debt-liquidating, interest rate-reducing depression. The effect of such a depression on private debt is shown by the topmost curve of Graph X. Private debt peaked in 1929 at $161.8 billion. By 1934 private debt was down to $124.5 billion---a 23 percent liquidation. (In 1981 private debt was $4.1 trillion and a similar liquidation would sweep away just under a trillion dollars of assets.)

The two curves at the center of Graph X show the course of long-term and short-term interest rates. From 1930 to 1940

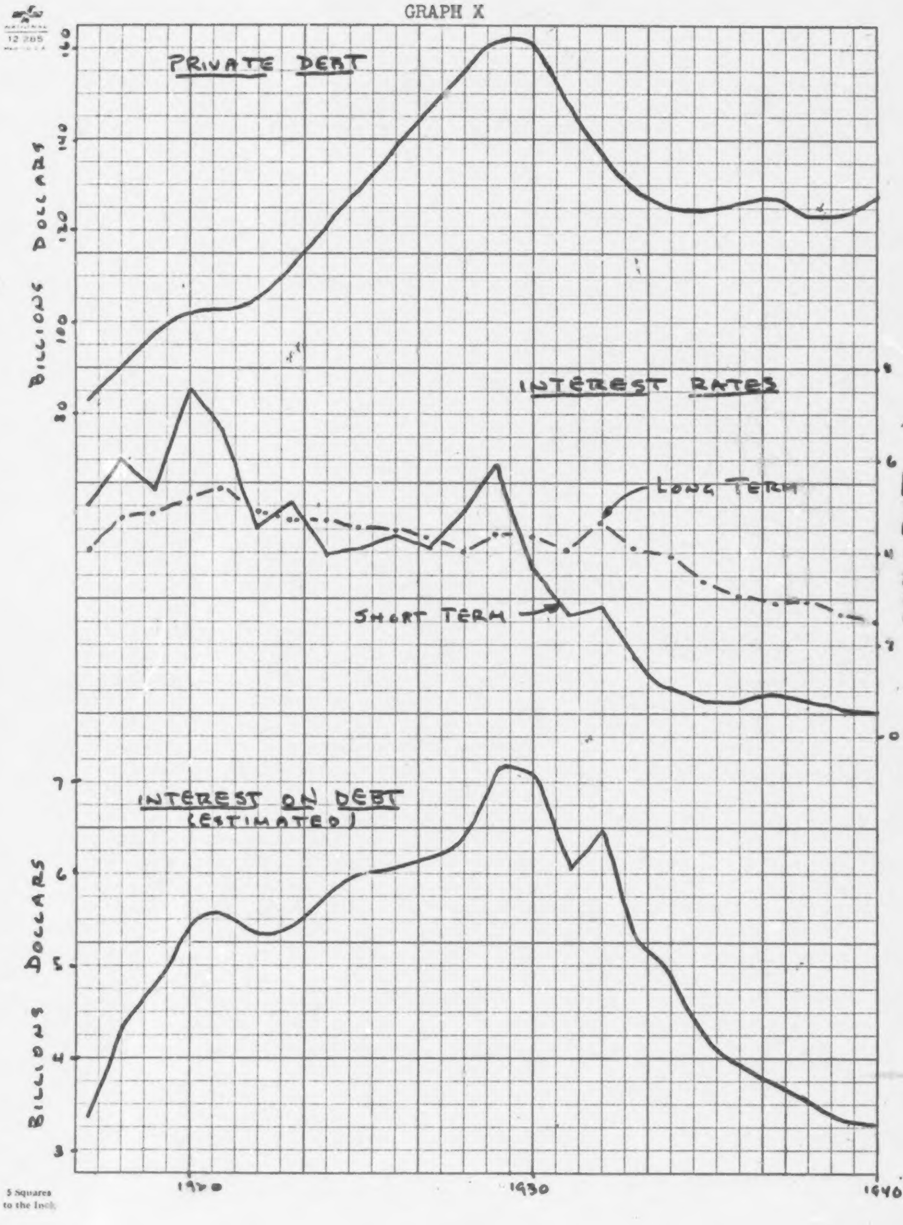
Table III

Period (Inclusive)	No. Yrs.	TDS Av. Yr.	TDI Av. Yr.	TDS/TDI	RGNP
1917-18	2	$17.7 bil.	$ 4.8 bil.	368.8%	+6.33%
1919-22	4	5.7	6.8	83.8	- .63
1923-28	6	7.7	7.3	105.5	+4.33
1923-29	7	7.4	7.5	98.7	+4.66
1930-38	9	-1.3	6.6	- 19.7	- .69
1930-39	10	- .9	6.5	- 13.8	+ .13
1940-45	6	37.1	7.5	494.7	+9.80
1941-45	5	43.2	8.0	540.0	+10.20
1942-44	3	53.1	8.2	647.6	+12.43
1946-49	4	10.0	10.7	93.5	-3.19
1946-50	5	16.1	11.0	146.4	- .93
1946-51	6	18.9	11.4	165.8	+ .56
1951-65	15	51.3	35.0	146.6	+3.75
1966-80	15	259.8	195.8	132.7	+3.15

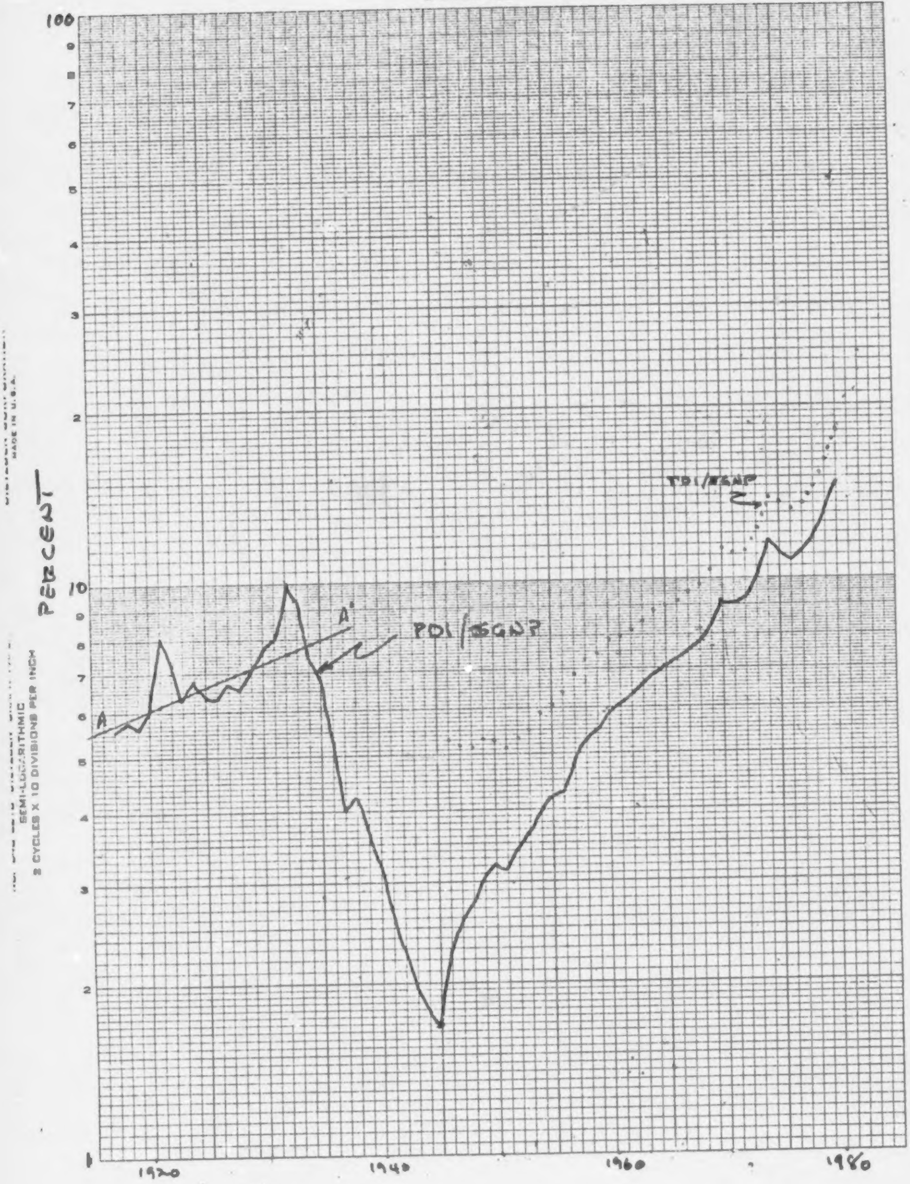
long-term rates were reduced by nearly half and short-term rates fell from near 5% to ½%. In consequence of the decline in both debt and interest rates, PDI, shown in the bottom curve of Graph X, was more than cut in half.

A better measure of the significance of interest burden than its amount in dollars, however, is interest burden as a percent of income or $GNP as shown by Graph XI. This graph covers all years for which reasonably accurate statistics are available. The PDI/$GNP ratio increased from around 5½% in 1917 to over 7% in 1929. The peaks in the curve above the reference line A-A' in 1921 and after 1929 were occasioned by large drops in $GNP rather than rapid increases in PDI. By 1945 the ratio was less than 2% and in all probability at the lowest point this century although there are no hard facts to prove this. One

GRAPH X


PRIVATE DEBT
BILLIONS DOLLARS
160
140
120
100
80
INTEREST RATES
LONG TERM
SHORT TERM
PERCENT
8
6
4
2
0
INTEREST ON DEBT
(ESTIMATED)
BILLIONS DOLLARS
7
6
5
4
3
1920
1930
1940
5 Squares
to the Inch

GRAPH XI


100
9
8
7
6
5
4
3
2
PERCENT
10
9
8
7
6
5
4
3
2
1
A
A'
PDI/$GNP
PDI/$GNP
1920
1940
1960
1980
SEMI-LOGARITHMIC
2 CYCLES X 10 DIVISIONS PER INCH
MADE IN U.S.A.

reason---and one of the most important---for the exceptionally long period of post-World War II prosperity was the thoroughgoing shake-out of the economy during the long years of the Great Depression

It was not until sometime between 1965 and 1968 that PDI/$GNP equaled and surpassed its 1929 high. Not coincidentally this was about the time that the Dow Jones Industrial Average, that sensitive barometer of the general health of the economy, made its all-time high (in real terms) and began an irregular downtrend---a downtrend in which it still finds itself. It can also not be taken as coincidence that shortly after PDI/$GNP returned to its 1929 level three recessions followed in rapid succession.

For reference purposes Graph XI shows in a dotted line the TDI/$GNP curve for the post-World War II years. For 1980 this curve was just under 18% and the PDI/$GNP curve near 15%, both at all-time and precarious highs.

Part IV

The crisis of our economy may be considered from what might be termed exactly the opposite point of view than that heretofore taken. Rather than think in terms of interest burden on debtors we may choose to consider the interest income of creditors. While it is more or less obvious in advance that the new approach is unlikely to lead to a very different conclusion it is desirable to proceed because an entirely different set of statistics is involved and it will be interesting to see to what extent previous conclusions are corroborated.

Table IV shows the types of income recognized by the Department of Commerce as constituting National Income. The latest figures available at the time of this writing are for the third quarter of 1981 and these are shown in Table IV along with those of the third quarter of 1971 and the ten-year growth rates.

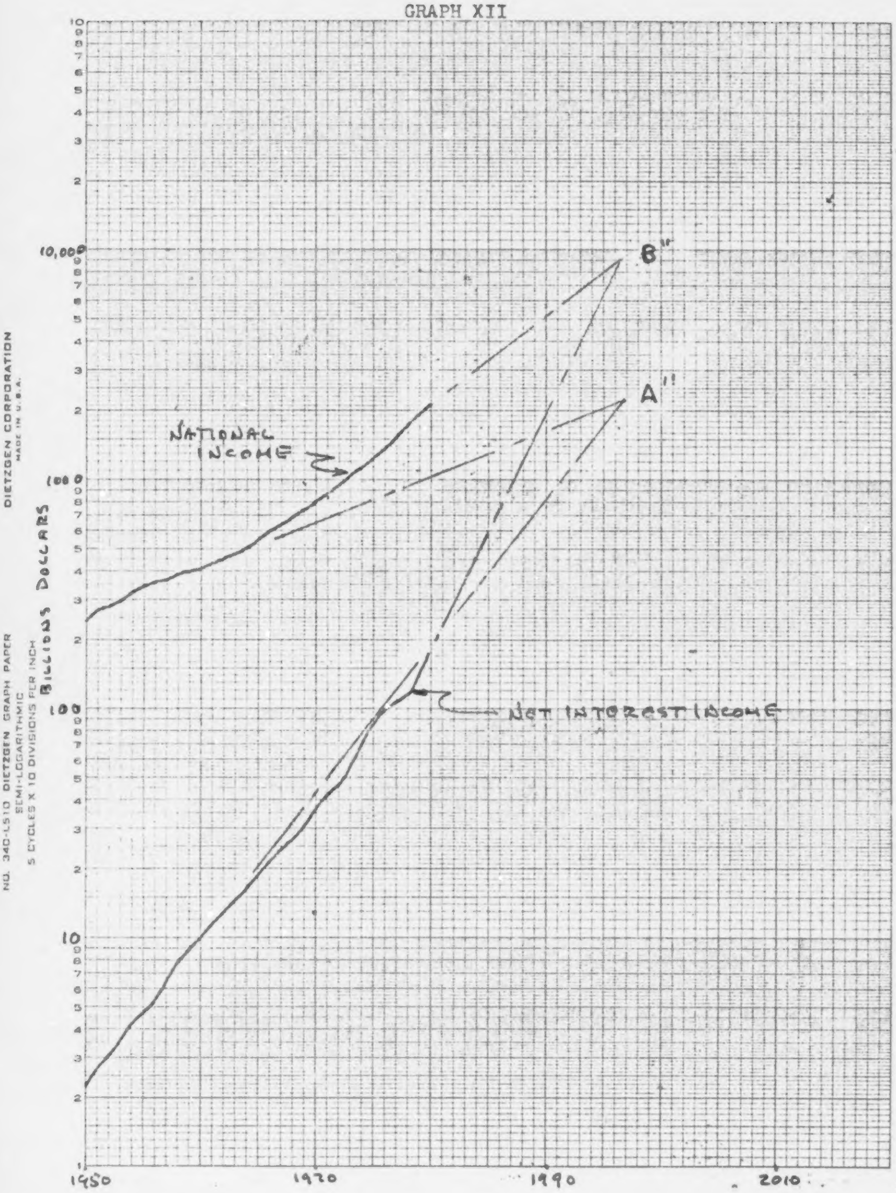
Table IV

Item	1971-III[8]	1981-III[9]	Growth Rate
Compensation of Employees	$655.7 bil.	$1789.9 bil.	10.56%
Proprietors Income	66.4	137.2	7.53
Rental Income	20.5	33.9	5.16
Corporate Profits	77.5	191.2	9.46
Net Interest Income	43.2	219.6	17.66
Total = National Income	863.4	2371.9	10.63

What is most significant about Table IV is that the growth rate of Net Interest Income (NII) is far greater than that of National Income (NI) while the growth rates of all other components are smaller. There is obviously occurring a redistribution of wealth from all other components to Net Interest Income, that is, to rentiers. Moreover, this redistribution is taking place at a rate which signals serious trouble in the years immediately ahead as Graph XII shows more definitively.

The heavy solid lines of Graph XII show growth of NII and NI for years 1950-80. Following the example of Graphs VI and VII this graph shows a projection of the 1952-60 growth rates to point A" and a projection of the 1979-80 growth rates to point B". Thus, Graph XII reveals essentially the same problem as the previous graphs. Whether we begin with the PDI/$GNP ratio, the TDI/$GNP ratio, or the NII/NI ratio we are led to the same conclusion---there is no way the system can function another three decades the way it has functioned the past three. There is, in fact, every reason to believe that the system cannot function another decade as it has in the recent past.

GRAPH XII


B''
A''
NATIONAL INCOME
NET INTEREST INCOME
10,000
1000
100
10
BILLIONS DOLLARS
1950
1970
1990
2010
NO. 340-L510 DIETZGEN GRAPH PAPER
SEMI-LOGARITHMIC
5 CYCLES X 10 DIVISIONS PER INCH
DIETZGEN CORPORATION
MADE IN U.S.A.

Part V

There is another level of generality on which the interest problem may be considered. Everyone has encountered at one time or another examples of the fantastic results of compound growth, for example, that if the United States population increased for the next thousand years as over the last one-hundred years, the population would reach three thousand trillion or three people per square foot of land area, Alaska and Hawaii included. Obviously it is impossible in the long run for population to increase at a rate greater than the rate of increase of living-space.

Similarly it is impossible in the long run for a debt in gold, however small, to increase at a rate greater than the rate of increase of the gold supply. One ounce of gold invested by Pizzaro from the loot of Peru at 5 percent would now amount to more than the gold supply of the entire world. If an economy grows at 3½ percent and the gold supply at ½ percent a "gold standard" or the payment of interest in gold at a rate greater than ½ percent is a long-term impossibility.

Still more generally, if an economy grows at 3½ percent in real terms, interest at a nominal rate greater than 3½ percent---say 10 percent on average as at present---must necessarily become "unreal" at some point before the owners of the debt own everything. What is "unreal" about the payment of interest at 10 percent today is that it is being paid with borrowed money. This only adds to an "unreal" debt---unreal in the sense it could never be liquidated for anywhere near its nominal amount.

In an economy which grows at virtually zero percent per year as was the case with virtually all economies up until the last few hundred years, the maximum rate of interest sustainable over a long period was zero percent. Perhaps this is why the sages and philosophers of the past, almost without exception, inveighed against usury or interest at any percentage whatever. In contrast, in his celebrated Defense of Usury Jeremy Bentham declared emphatically that, "No one rate of interest is naturally more proper than another, " but he was wrong---a rate of interest greater than the real growth rate of the economy will in due time bring about such a transfer of wealth from creditors to debtors as no one would deem proper.

I conclude now with an analogy which I hope will make clear why this problem which has been with us and slowly worsened since the end of the Great Depression without attracting much attention is now a matter of surpassing urgency. For the sake of the case imagine a laboratory beaker of, say, 1000 ccs filled with a nutritious broth. Imagine that we introduce into the broth a billionth of a cc of a micro-organism capable of doubling every ten minutes. One would have to watch the beaker for hours and hours before the organism filled it one-quarter full. In another ten minutes, however, it would be half full, and in yet another ten minutes, completely full.

It is the nature of compound growth that a process can go entirely unnoticed, indeed, can be unnoticeable, for great lengths of time and then almost suddenly become impossible to ignore. The human race required perhaps two billion years to populate the planet; it could vastly overpopulate it in less than another two hundred years. Similarly with PDI/$GNP, TDI/$GNP, and NII/NI. It has been possible to ignore these ratios without calamatous consequences up until now. We cannot continue to ignore them much longer with similar impunity.

Part VI

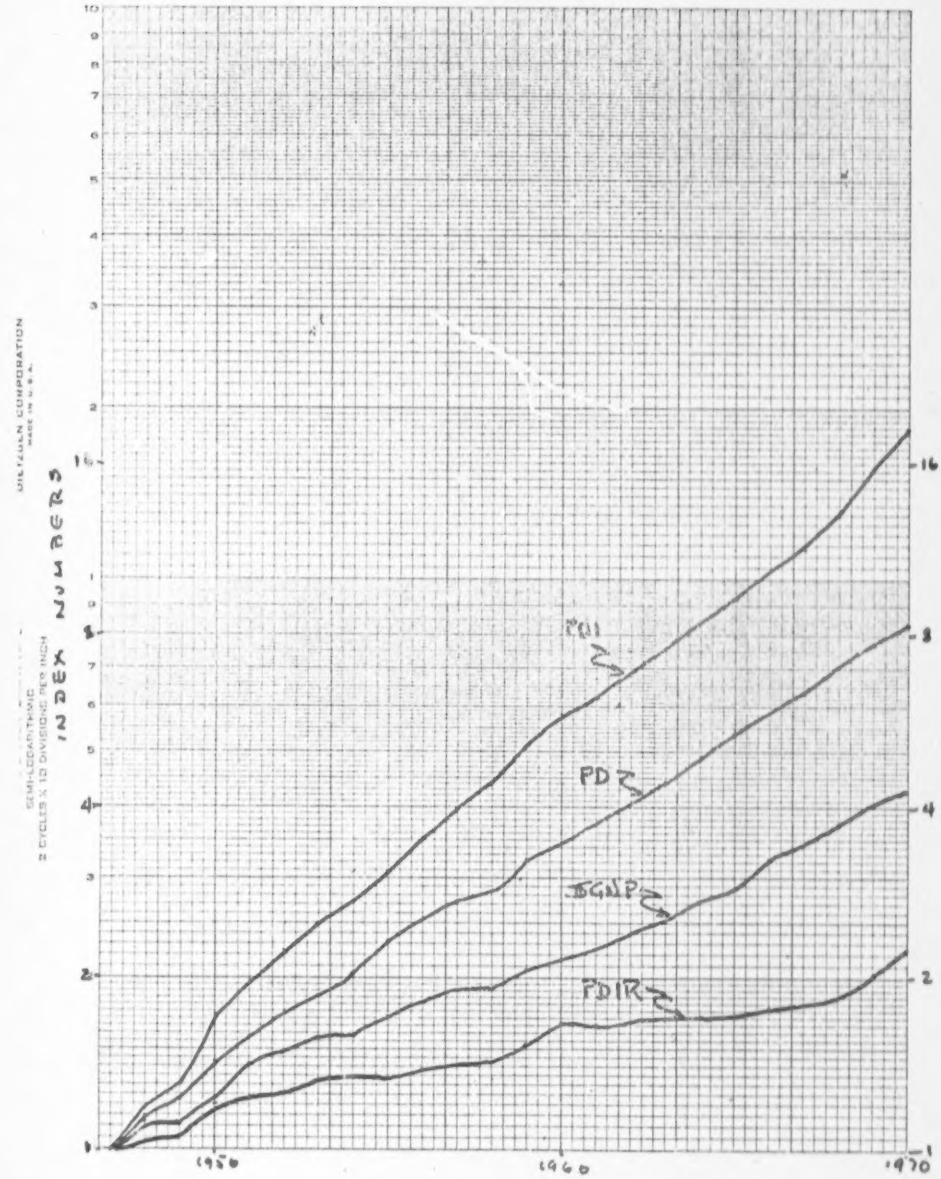
The prosperity of the first two post-World War II decades was prosperity based on borrowed money and therefore could not endure. The fundamental defect of "The American Way" and the underlying cause of the present crisis is debt dependence---overindebtedness. Between 1947 and 1969 Private Debt (PD) in the United States increased nearly eight-fold while $GNP only quadrupled. This doubling of the private sector debt/income or TD/$GNP ratio in only twenty-two years is of surpassing importance if the current economic problems are to be understood.

There is no way that for over twenty years debt could increase twice as fast as income or twice as fast as assets without upward pressure on interest rates. That "risk insurance" should be added to rates which would otherwise have been charged was inevitable. Had interest rates remained constant from 1947 to 1969 the doubling of the PD/$GNP ratio would have meant a doubling of the interest burden/income or PDI/$GNP ratio. In fact, the average rate of interest on private debt doubled from 1947 to 1969 and thus the PDI/$GNP ratio quadrupled.

Graph XIII shows curves for the 1947-70 growth of interest rates, $GNP, private debt, and interest burden. It shows as well that the respective growth multiples were in the approximate ratio of 2/4/8/16. It may be added that for 1947-80 the multiples were in the approximate ratio of 3/9/27/81. Thus a handy rule for the ratio appears to be $x/x^2/x^3/x^4$.

Toward the end of the decade of the sixties the rate of growth of the PD/$GNP ratio began to slow as the private sector began to exhaust its credit. Thus began the decade of the seventies---

GRAPH XIII


INDEX NUMBERS
PDI
PD
DGNP
PDIR
1
2
4
8
16
1950
1960
1970
SEMI-LOGARITHMIC
2 CYCLES X 10 DIVISIONS PER INCH
DIETZGEN CORPORATION
MADE IN U.S.A.

a decade of Federal guarantees to facilitate private debt growth and of massive Federal deficit spending to supplement private debt growth. A tripling of Federal debt from 1969 to 1980 barely kept the economy limping along.

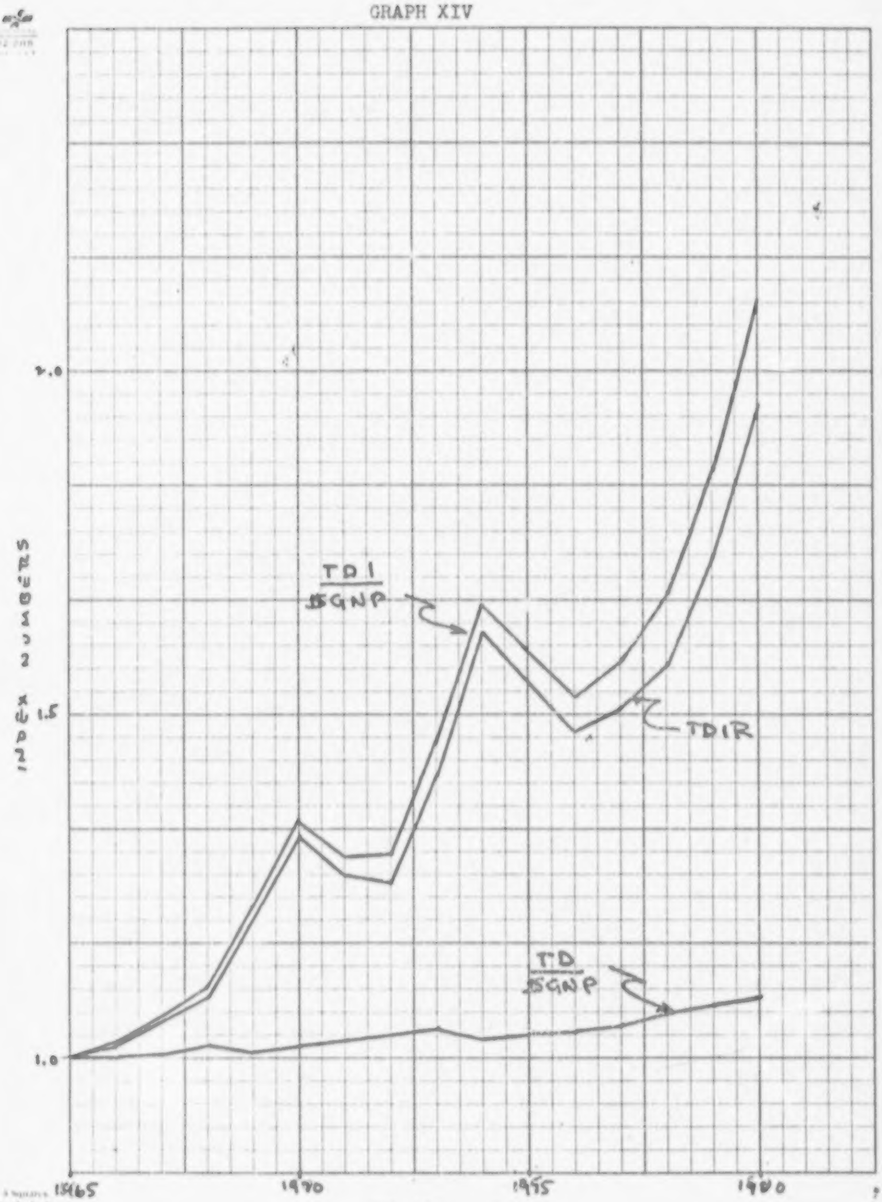
In the long run there can be no satisfactory economic performance unless we come to grips with debt dependence and the resulting overindebtedness. Our problem may best be defined as how to devise institutions which will enable us to enjoy prosperity otherwise than on borrowed money. As Joan Robinson wrote in Challenge (Nov.-Dec.1979):

> If there were no expenditure this month except out of last month's income, the system would quickly run down... Thus, even to maintain, still more to expand, the flow of income there must be some booster to expenditure over and above expenditure out of income being currently received.
>
> The main boosters, of course, are budget deficits of governments...the excess of business investment over and above what is financed out of current cash flow; and consumer's expenditure covered by borrowing.

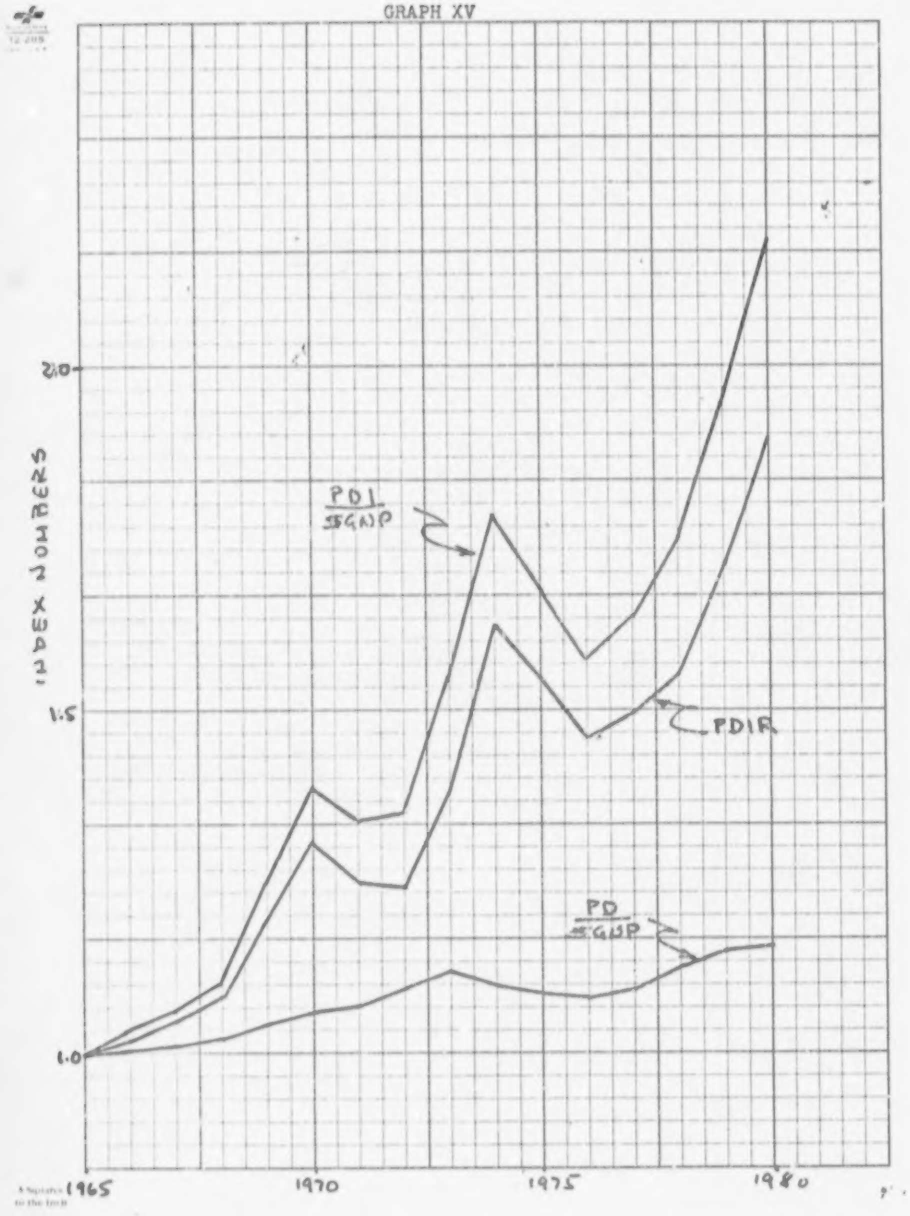
While the long-term and root problem of the private sector is debt dependence---the growth of the PD/$GNP ratio leading to growth of PDI/$GNP, large-scale Federal deficit spending brings to the fore the TDI/$GNP ratio. Graph XIV shows curves for the latter ratio and its factors---TD/$GNP and TDIR. What is apparent from this graph is that our immediate problem is interest rates---that the quickest and easiest way to bring down the TDI/$GNP ratio is to bring down interest rates. The Reagan-Volcker policy of record-high interest rates is absurd unless its objective is to produce a 1930s type debt liquidation.

But somehow we must accomplish a reduction in TDIR without a soaring growth in debt. I see no way to accomplish this other than by credit allocation other than by "money market forces".

GRAPH XIV


INDEX NUMBERS
2.0
1.5
1.0
TDI
$GNP
TDIR
TD
$GNP
1965
1970
1975
1980
5 Squares to the Inch

GRAPH XV


INDEX NUMBERS
2.0
1.5
1.0
1965
1970
1975
1980
PDI / $GNP
PDIR
PD / $GNP
5 Squares to the Inch

Since the government already effectively controls the supply side of money and since, therefore, forces other than market forces are already operative, no new departure in principle is involved in government control of who gets access to the money it creates. When it was discovered in Nineteenth Century England that, in the words of Walter Bagehot, "money will not manage itself," it also bacame apparent that a money-economy will not manage itself. I consider it prudent to extend government management into new areas only when it becomes essential to survival as is now the case. Not only will control of money have to be expanded to control of credit but if interest rates are to be controlled there is no reasonable argument against control of wage rates, profit rates, or prices. Some sort of incomes policy, tax-based or otherwise, must be an essential part of a program designed to prevent The Great Depression II.

NOTES

1. See, for example, "Pelf and Petroleum" by Michael Kinsley in New Republic, June 13, 1981.

2. *Stagflation: Its Causes and Cures*: Dec. 1980 Joint Economic Committee of Congress.

3. For data on debt and interest see Appendix.

4. *Survey of Current Business*, Jan. 1982, p. 10.

5. "The Debt-Deflation Theory of Great Depressions" in *Econometrica* 3:35. "...as explanations of the so-called business cycle... I doubt the adequacy of over-production, under-consumption, over-capacity, price dislocation, mal-adjustment between agricultural and industrial prices, over-confidence, over-investment, over-saving, over-spending, and the discrepancy between saving and investment.

   I venture the opinion that inthe great booms and depressions each of the above-named factors has played a subordinate role as compared with two dominant factors, namely, over-indebtedness to start with and deflation following soon after..."p. 341

6. Data on which this and subsequent tables and graphs is based will be found in the Appendix.

7. Anthony Sampson, *The Money Lenders*, New York: Viking, 1981.

8. *The National Income and Product Accounts of the United States, 1929-74*, U. S. Government Printing Office Stock No. 003-010-00052-9, p. 43.

9. *Survey of Current Business*, January 1982, p. 10.

APPENDIX
TOTAL DEBT AND ITS COMPONENTS 1946-80.

	TD	FD	SLD	GD	PD
1946	379.1	229.2	14.9	244.1	135.0
1947	398.2	222.1	16.3	238.4	159.8
1948	416.2	216.7	18.5	235.2	181.0
1949	435.3	219.1	21.0	240.1	195.2
1950	472.9	218.4	24.4	242.8	230.1
1951	498.7	218.2	26.6	244.8	253.9
1952	533.6	223.6	30.2	253.8	279.8
1953	565.1	230.6	34.5	265.1	300.0
1954	597.4	233.0	40.6	273.6	323.8
1955	650.2	233.2	45.9	279.1	371.1
1956	683.2	227.8	49.5	277.3	405.9
1957	716.4	226.9	53.7	280.6	435.8
1958	762.0	235.8	59.2	295.0	467.0
1959	826.3	244.8	65.5	310.3	516.0
1960	870.7	243.1	70.8	313.9	556.8
1961	924.4	250.8	75.9	326.7	597.7
1962	989.9	259.1	81.2	340.3	649.6
1963	1066.6	264.7	86.9	351.6	715.0
1964	1147.4	271.4	92.9	364.3	783.1
1965	1242.1	275.3	100.3	375.6	866.5
1966	1329.3	284.5	105.9	390.4	938.9
1967	1425.9	297.7	113.7	411.4	1014.5
1968	1559.0	315.1	123.2	438.3	1120.7
1969	1691.9	321.2	133.1	454.3	1237.6
1970	1810.3	343.0	144.4	487.4	1322.9
1971	1979.6	373.8	161.8	535.6	1444.0
1972	2204.7	397.4	176.5	573.9	1630.8
1973	2479.3	425.7	191.2	616.9	1862.4
1974	2643.8	457.6	207.7	665.3	1978.5
1975	2872.5	552.5	223.8	776.3	2096.2
1976	3194.1	637.6	239.5	877.1	2317.0
1977	3604.8	716.7	261.4	978.1	2626.7
1978	4130.6	807.1	287.5	1094.6	3036.0
1979	4674.0	893.8	309.3	1203.1	3470.9
1980	5138.6	1016.1	336.1	1352.2	3786.4

28.

Source: Federal Reserve System - Flow of Funds Accounts
TD is Total Credit Market Debt plus Security Debt plus Trade Debt. FD is total of all U. S. Government Securities. SLD is state + local debt. GD is the sum of the preceding two columns. PD is total of all private debts.
All amounts are in billions of current dollars.

APPENDIX
DEFICIT SPENDING - 1946- 80

Year	TDS	FDS	SLDS	GDS	PDS
1947	19.1	-7.1	1.4	-5.7	24.8
1948	18.0	-5.4	2.2	-3.2	21.2
1949	19.1	2.4	2.5	4.9	14.2
1950	37.6	-0.7	3.4	2.7	34.9
1951	25.8	-0.2	2.2	2.0	23.8
1952	34.9	5.4	3.6	9.0	25.9
1953	31.5	7.0	4.3	11.3	20.2
1954	32.3	2.4	6.1	8.5	23.8
1955	52.8	.2	5.3	5.5	47.3
1956	33.0	-5.4	3.6	-1.8	34.8
1957	33.2	-0.9	4.2	3.3	29.9
1958	45.6	8.9	5.5	14.4	31.2
1959	64.3	9.0	6.3	15.3	49.0
1960	44.4	-1.7	5.3	3.6	40.8
1961	53.7	7.7	5.1	12.8	40.9
1962	65.5	8.3	5.3	13.6	51.9
1963	76.7	5.6	5.7	11.3	65.4
1964	80.8	6.7	6.0	12.7	68.1
1965	94.7	3.9	7.4	11.3	83.4
1966	87.2	9.2	5.6	14.8	72.4
1967	96.6	13.2	7.8	21.0	75.6
1968	133.1	17.4	9.5	26.9	106.2
1969	132.9	6.1	9.9	16.0	116.9
1970	118.4	21.8	11.3	33.1	85.3
1971	169.3	30.8	17.4	48.2	121.1
1972	225.1	23.6	14.7	38.3	186.8
1973	274.6	28.3	14.7	43.0	231.6
1974	164.5	31.9	16.5	48.4	116.1
1975	228.7	94.9	16.1	111.0	117.7
1976	321.6	85.1	15.7	100.8	220.8
1977	410.7	79.1	21.9	101.0	309.7
1978	525.8	90.4	26.1	116.5	409.3
1979	543.4	86.7	21.8	108.5	434.9
1980	464.6	122.3	26.8	149.1	315.5

See preceding page for source and symbol code.

APPENDIX
TOTAL DEBT INTEREST AND ITS COMPONENTS
(Billions Current Dollars)

Year	TDI	FDI	SLDI	GDI	PDI
1946	11.1	5.5	.6	6.1	5.0
1947	12.0	5.4	.6	6.0	6.0
1948	13.2	5.6	.5	6.1	7.1
1949	14.0	5.5	.6	6.1	7.9
1950	15.4	5.6	.6	6.2	9.2
1951	16.9	5.7	.7	6.4	10.5
1952	18.5	5.9	.7	6.6	11.9
1953	20.3	6.1	.8	6.9	13.4
1954	21.8	6.4	.9	7.3	14.5
1955	24.1	6.4	1.1	7.5	16.6
1956	27.0	6.8	1.2	8.0	19.0
1957	30.4	7.3	1.4	8.7	21.7
1958	32.9	7.7	1.6	9.3	23.6
1959	36.1	7.8	1.8	9.6	26.5
1960	39.9	8.1	2.1	10.2	29.7
1961	41.6	7.6	2.2	9.8	31.8
1962	46.3	8.3	2.5	10.8	35.5
1963	51.0	8.9	2.7	11.6	39.4
1964	56.4	9.6	2.9	12.5	43.9
1965	61.9	10.0	3.1	13.1	48.8
1966	69.3	11.1	3.4	14.5	54.8
1967	75.7	12.0	3.8	15.8	59.9
1968	85.2	13.8	4.1	17.9	67.3
1969	98.9	14.9	4.8	19.7	79.2
1970	112.9	16.6	5.5	22.1	90.8
1971	120.5	16.6	6.4	23.0	97.5
1972	133.3	17.3	6.9	24.2	109.1
1973	163.9	21.1	8.3	29.4	134.5
1974	200.4	23.9	9.6	33.5	166.9
1975	211.2	27.1	11.0	38.1	173.1
1976	226.8	32.1	12.5	44.6	182.2
1977	260.4	35.4	13.7	49.1	211.3
1978	311.7	43.5	14.9	58.4	253.3
1979	388.4	53.6	16.3	69.9	318.5
1980	478.0 e	75.0 e	18.0 e	93.0 e	385.0 e

Source: National Income and Product Accounts of Department of Commerce; various issues of Survey of Current Business

APPENDIX
DATA FOR YEARS 1916-45

Year	TD	TDS	TDI	PD	PDS	PDI	$GNP	RGNP
1916	82.2		3.3	76.5		3.1	48.3	208.2
1917	94.5	12.3	3.8	82.4	5.9	3.3	60.4	209.6
1918	117.5	23.0	5.7	91.5	9.1	4.4	76.4	235.4
1919	128.3	10.8	6.2	97.2	5.7	4.7	84.0	227.0
1920	135.7	7.4	7.0	105.8	8.6	5.5	91.5	218.5
1921	136.3	.6	7.2	106.2	.4	5.6	69.6	198.2
1922	140.2	3.9	6.8	109.5	3.3	5.3	74.1	229.5
1923	146.7	6.5	6.9	116.3	6.8	5.4	85.1	257.2
1924	153.4	6.7	7.2	123.0	6.7	5.8	84.7	256.5
1925	162.9	9.5	7.3	132.3	9.3	6.0	93.1	278.2
1926	169.2	6.3	7.4	138.9	6.6	6.1	97.0	294.6
1927	177.9	8.7	7.6	147.6	8.7	6.4	94.9	294.3
1928	186.3	8.4	7.5	156.1	8.5	6.3	97.0	296.0
1929	191.9	5.6	8.5	161.8	5.7	7.2	103.4	315.7
1930	192.3	.4	8.5	161.1	- .7	7.1	90.7	285.7
1931	182.9	-9.4	7.5	148.4	-12.7	6.1	76.1	263.5
1932	175.0	-7.9	8.2	137.1	-11.3	6.4	58.3	227.1
1933	168.5	-6.5	6.9	127.9	- 9.2	5.3	55.8	222.1
1934	171.6	3.1	6.7	125.3	- 2.6	4.9	65.3	239.1
1935	175.0	3.4	5.9	124.5	- .8	4.2	72.5	260.0
1936	180.6	5.6	5.5	126.7	2.2	3.9	82.7	295.5
1937	182.2	1.6	5.3	126.9	.2	3.7	90.9	310.2
1938	179.9	-2.3	5.2	123.3	-3.6	3.6	85.0	296.7
1939	183.3	3.4	4.9	124.3	1.0	3.3	90.9	319.8
1940	189.8	6.5	4.8	128.6	4.3	3.3	100.0	344.1
1941	211.4	21.6	5.3	139.0	10.4	3.5	125.0	400.4
1942	258.6	47.2	6.7	141.5	2.5	3.7	158.5	461.7
1943	313.2	54.6	8.2	144.3	2.8	3.8	192.1	531.6
1944	370.6	57.4	9.6	144.8	.5	3.8	210.6	569.1
1945	405.9	35.3	10.4	140.0	-4.8	3.6	212.4	560.4

Figures for TD, TDS, PD, PDS and GNP 1916-28 are from Historical Statistics of the United States, Colonial Times to 1970, U. S. Government Printing Office, 1976

Figures for GNP 1929-45 from National Income and Product Accounts. RGNP is in 1972 constant dollars. All other amounts are current dollars.

Figures for TDI and PDI are my estimates based on debt and current interest rates.

APPENDIX
INTEREST

Year	FDI	SLDI	GDI	PDI	TDI	MIP
1946	4.3	.6	4.9	4.9	9.8	10.6
1947	4.5	.6	5.1	5.0	10.1	11.0
1948	4.7	.6	5.3	5.9	11.2	12.3
1949	4.7	.6	5.3	6.5	11.8	13.0
1950	4.8	.7	5.5	8.7	14.2	15.6
1951	4.6	.7	5.3	9.9	15.2	16.8
1952	4.8	.7	5.5	11.1	16.6	18.5
1953	5.2	.8	6.0	12.5	18.5	20.8
1954	5.2	.9	6.1	13.6	19.7	22.3
1955	5.2	1.1	6.3	15.5	21.8	24.9
1956	5.6	1.2	6.8	17.7	24.5	28.3
1957	5.9	1.4	7.3	19.9	27.2	32.0
1958	6.3	1.6	7.9	21.7	29.6	35.0
1959	6.4	1.8	8.2	25.8	34.0	38.7
1960	8.1	2.1	10.2	29.1	39.3	45.7
1961	7.6	2.2	9.8	31.0	40.8	48.2
1962	8.3	2.5	10.8	34.1	44.9	54.0
1963	8.9	2.7	11.6	37.9	49.5	60.0
1964	9.6	2.9	12.5	42.0	54.5	66.6
1965	10.0	3.1	13.1	46.6	59.7	73.9
1966	11.1	3.4	14.5	52.7	67.2	83.5
1967	12.0	3.8	15.8	57.0	72.8	91.5
1968	13.8	4.2	18.2	64.9	83.1	104.1
1969	14.9	4.8	19.7	79.2	98.9	122.7
1970	16.6	5.6	22.2	92.9	115.1	140.9
1971	16.6	6.5	23.1	97.3	120.4	249.9
1972	17.3	7.5	24.8	108.3	133.1	166.9
1973	21.1	8.5	29.6	138.0	167.6	211.5
1974	23.9	9.6	33.5	172.3	205.8	264.0
1975	27.0	11.1	38.1	174.8	212.9	273.1
1976	32.1	12.5	44.6	182.2	226.8	293.0
1977	35.4	13.7	49.1	211.3	260.4	336.0
1978	43.5	14.9	58.4	253.3	311.7	404.2
1979	53.6	16.3	69.9	318.5	388.4	511.2
1980						

Note: GDI is the sum of FDI and SLDI (state and local). MIP (monetary interest paid) is TDI plus financial sector interest paid on deposits. Source: National Income and Product Accounts, Table 8.7. All amounts are in billions oc current dollars.

APPENDIX

INTEREST RATES

Year	PD	PDIR	PDI	TD	TDIR	TDI
1946	135.0	3.63%	4.9	379.1	2.59%	9.8
1947	159.8	3.13	5.0	398.2	2.54	10.1
1948	181.0	3.26	5.9	416.2	2.69	11.2
1949	195.2	3.33	6.5	435.3	2.71	11.8
1950	230.1	3.78	8.7	472.9	3.00	14.2
1951	253.9	3.90	9.9	498.7	3.05	15.2
1952	279.8	3.97	11.1	533.6	3.11	16.6
1953	300.0	4.17	12.5	565.1	3.27	18.5
1954	323.8	4.20	13.6	597.4	3.30	19.7
1955	371.1	4.18	15.5	650.2	3.35	21.8
1956	405.9	4.36	17.7	683.2	3.59	24.5
1957	435.8	4.57	19.9	716.4	3.80	27.2
1958	467.0	4.65	21.7	762.0	3.88	29.6
1959	516.0	5.00	25.8	826.3	4.11	34.0
1960	556.8	5.23	29.1	870.7	4.51	39.3
1961	597.7	5.19	31.0	924.4	4.41	40.8
1962	649.6	5.25	34.1	989.9	4.54	44.9
1963	715.0	5.30	37.9	1066.6	4.64	49.5
1964	783.1	5.36	42.0	1147.4	4.75	54.5
1965	866.5	5.38	46.6	1242.1	4.81	59.7
1966	938.9	5.61	52.7	1329.3	5.06	67.2
1967	1014.5	5.62	57.0	1425.9	5.11	72.8
1968	1120.7	5.79	64.9	1599.0	5.20	83.1
1969	1237.6	6.40	79.2	1691.9	5.85	98.9
1970	1322.9	7.02	92.9	1810.3	6.36	115.1
1971	1444.0	6.74	97.3	1979.6	6.08	120.4
1972	1630.8	6.64	108.3	2204.7	6.04	133.1
1973	1862.4	7.43	138.3	2479.3	6.76	167.6
1974	1978.5	8.71	172.3	2643.8	7.78	205.8
1975	2096.2	8.34	174.8	2872.5	7.41	212.9
1976	2317.0	7.86	182.2	3194.1	7.10	226.8
1977	2626.7	8.04	211.3	3604.8	7.22	260.4
1978	3036.0	8.34	253.3	4130.6	7.55	311.7
1979	3470.9	9.18	318.5	4674.0	8.31	388.4
1980	3786.4	10.17	385.0	5138.6	9.30	478.0

Note: PD, PDI, TD, and TDI are in billions of current dollars. Figures come from sources previously indicated. PDIR and TDIR have been calculated from the debt and interest figures.

APPENDIX

INDICES

YEAR	PD	PDI	PDIR	$GNP
1947	1.000	1.000	1.000	1.000
1948	1.133	1.180	1.042	1.133
1949	1.222	1.300	1.064	1.108
1950	1.440	1.740	1.208	1.229
1951	1.589	1.980	1.246	1.419
1952	1.750	2.220	1.268	1.493
1953	1.877	2.500	1.332	1.574
1954	2.026	2.720	1.342	1.574
1955	2.322	3.100	1.335	1.716
1956	2.540	3.540	1.393	1.809
1957	2.727	3.980	1.460	1.905
1958	2.922	4.340	1.486	1.929
1959	3.229	5.160	1.597	2.093
1960	3.484	5.820	1.671	2.173
1961	3.740	6.200	1.658	2.251
1962	4.065	6.820	1.667	2.424
1963	4.474	7.580	1.693	2.560
1964	4.900	8.400	1.712	2.736
1965	5.422	9.320	1.719	2.965
1966	5.875	10.540	1.792	3.243
1967	6.349	11.400	1.796	3.430
1968	7.013	12.980	1.850	3.747
1969	7.745	15.840	2.045	4.050
1970	8.278	18.580	2.243	4.259
1971	9.036	19.460	2.153	4.622
1972	10.205	21.660	2.121	5.088
1973	11.655	27.660	2.374	5.690
1974	12.381	34.460	2.783	6.152
1975	13.118	34.960	2.665	6.646
1976	14.499	36.440	2.511	7.370
1977	16.437	42.260	2.569	8.228
1978	18.999	50.660	2.665	9.250
1979	21.720	63.700	2.933	10.356
1980	23.695	77.000e	3.249e	11.266
1981	26.045e	87.000e	3.387e	12.536

APPENDIX

INTEREST/GNP RATIOS AND INTEREST RATES

	TD	TD IX	TDI	TDI IX	TS IX	TD/TS IX	TDI/TS IX	TDIR	TDIR IX
1965	1242.1	1.000	59.7	1.000	1.000	1.000	1.000	4.81	1.000
1966	1329.3	1.070	67.2	1.126	1.094	.978	1.029	5.06	1.052
1967	1425.9	1.148	72.8	1.219	1.157	.992	1.054	5.11	1.062
1968	1599.0	1.287	83.1	1.392	1.264	1.018	1.101	5.20	1.081
1969	1691.0	1.361	98.9	1.657	1.366	.996	1.213	5.85	1.218
1970	1810.3	1.457	115.1	1.928	1.436	1.015	1.343	6.36	1.323
1971	1979.6	1.594	120.4	2.017	1.559	1.022	1.294	6.08	1.266
1972	2204.7	1.775	133.1	2.229	1.716	1.034	1.299	6.04	1.256
1973	2479.3	1.996	167.6	2.807	1.919	1.040	1.463	6.76	1.407
1974	2643.8	2.128	205.8	3.447	2.075	1.026	1.661	7.78	1.618
1975	2872.5	2.313	212.9	3.566	2.242	1.032	1.591	7.41	1.542
1976	3194.1	2.572	226.8	3.799	2.486	1.035	1.528	7.10	1.476
1977	3604.8	2.902	260.4	4.362	2.775	1.046	1.572	7.22	1.503
1978	4130.6	3.325	311.7	5.221	3.120	1.066	1.673	7.55	1.569
1979	4674.0	3.763	388.4	6.506	3.493	1.077	1.863	8.31	1.729
1980	5138.6	4.137	478.0	8.007	3.800	1.089	2.107	9.30	1.935

	PD	PD IX	PDI	PDI IX	TS IX	PD/TS IX	PDI/TS IX	PDIR	PDIR IX
1965	866.5	1.000	46.6	1.000	1.000	1.000	1.000	5.38	1.000
1966	938.9	1.084	52.7	1.130	1.094	.991	1.033	5.61	1.042
1967	1014.5	1.171	57.0	1.223	1.157	1.012	1.057	5.62	1.044
1968	1120.7	1.293	64.9	1.393	1.264	1.023	1.102	5.79	1.077
1969	1237.6	1.428	79.2	1.700	1.366	1.045	1.245	6.40	1.191
1970	1322.9	1.527	92.9	1.994	1.436	1.063	1.389	7.02	1.307
1971	1444.0	1.666	97.3	2.088	1.559	1.069	1.339	6.74	1.253
1972	1630.8	1.882	108.3	2.324	1.716	1.097	1.354	6.64	1.234
1973	1862.4	2.149	138.3	2.968	1.919	1.120	1.547	7.43	1.381
1974	1978.5	2.283	172.3	3.697	2.075	1.100	1.782	8.71	1.620
1975	2096.2	2.419	174.8	3.751	2.242	1.079	1.673	8.34	1.551
1976	2317.0	2.674	182.2	3.910	2.486	1.076	1.573	7.86	1.462
1977	2626.7	3.031	211.3	4.534	2.775	1.092	1.634	8.04	1.496
1978	3036.0	3.504	253.3	5.436	3.120	1.123	1.742	8.34	1.551
1979	3470.9	4.006	318.5	6.835	3.493	1.147	1.957	9.18	1.706
1980	3786.4	4.370	385.0	8.262	3.800	1.150	2.174	10.17	1.890

Representative REUSS. Thank you, Mr. Hotson.

PRESENT 5.5-PERCENT CEILING IS IGNORED

Let me start with Mr. Sommers. You point out, Mr. Sommers, in your prepared statement, and I'll quote a sentence from you:

> Given the present structure of anticipations, a genuine increase in the availability of credit will not produce lower interest rates unless the Federal Reserve explicitly renounces its dedication to its targets.

Are you there talking about the fact that at the present time the Federal Reserve is operating under proclaimed 1982 M_1 targets of 2.5 to 5.5 percent but in fact has been producing new M_1 at the rate of close to 9 percent? The Federal Reserve furthermore recently in public statements has sort of blithely waved aside that performance on its part and said, "Well, not to worry; we're going to create enough new money, and if it comes in a little over targets that's all right." Are you saying that that isn't going to work?

Mr. SOMMERS. I don't think that's enough, Mr. Chairman.

Representative REUSS. Why not?

FEDERAL RESERVE MISLEADS FINANCIAL MARKETS

Mr. SOMMERS. Because it leaves the mechanism in place. That is, it leaves the prima facie assumption that the behavior of those money stock data—and I have grave doubts, and I think Mr. Wilmeth would too about the representativeness of those data—it leaves the continued fundamental impression that those growth rates will dictate Federal Reserve policy over the short term, and the behavior patterns of the market are very clear. Even since those mild limitations on the policy the Federal Reserve has felt free to announce, the Federal Reserve's behavior remains generally predictable with respect to those money figures, and the market reacts to those expectations.

POLICY "THE WORST OF TWO WORLDS"

Representative REUSS. Would you agree, then, that present Federal Reserve policy and proclamation gives us the worst of both worlds? That is to say, on the one hand, if they try now to get within their 1982 targets, having grossly overshot them on the upside so far, they will produce a disastrously low rate of M_1 increment for the rest of this year which will bring about a continuation of untenably high interest rates. And on the other hand, if they continue with an election year help—the administration binge of voting dry but drinking wet, that is, proclaiming their targets but then exceeding them, they so spook the markets that interest rates also may remain disastrously high not necessarily because of tight money but because of lack of confidence in the central bank? Would you agree with that?

Mr. SOMMERS. I do agree with it and it's a very unfortunate trap. I don't think the Federal Reserve itself was aware initially that the consequences would take that form. There are distinctions between the short-term rates and the long-term rates as between forms of behavior. That is, in providing resources very limitedly or providing them abundantly, the consequences are different.

The tendencies of the rates in both cases are such that a considerable decline in the real rates which are now the great albatross hanging on the business system cannot be achieved under these conditions.

DIRECTIVE IN CONGRESSIONAL BUDGET RESOLUTIONS

Representative REUSS. As you perhaps know, the Senate has already moved and the House may in the next few days move toward the incorporation in its budget resolution of a directive to the Federal Reserve to reevaluate its monetary targets—and here, of course, we're talking about the 2.5- to 5.5-percent target—and come up with a target which is more realistic in terms of the need for money creation and at the same time more realistic in terms of not spooking the markets.

If you were a member of the Federal Reserve Board or the Open Market Committee, and you were confronted with such a mandate from the Congress, would you have any difficulty in responding to that mandate by a mild raising of the upper limit of the ceiling and by a seizing upon of a monetary target consistent with the two aims that you have just enunciated; namely, enough to help get the economy—particularly in view of better budgetary control—out of the recession, while at the same time not so much as either to print money in untenable amounts or to spook the markets? Would you have any doubt about the ability of mortal man and woman to do that sort of response to Congress?

Mr. SOMMERS. No; I really don't, Mr. Chairman. I think that's a partial solution.

FEDERAL RESEVE SHOULD BE PRAGMATIC

I think the Federal Reserve would be well advised to reestablish its rights to pragmatism. We are in an awful recession. The leads established by the technicians between money growth and its inflation consequences are incredibly long. They are mysteriously long, and they are dubiously long as far as I'm concerned. But even if they are right, I do not see why the five or six quarters before the effect is visible, and the intense statistical work, doesn't permit ample time for the Federal Reserve to accept responsibility for cyclical conditions and employment as well as inflation.

One of the paradoxes of that market in New York—it's nationwide but it's centered in New York—is it's capacity to continue to refer to the dangers of inflation up ahead when most of the companies there whose shares are traded on that market are suffering from violent deflation, as visible in their profits which in the first quarter fell I think by about as much as any time in the postwar years.

I'm not saying the fears of inflation are entirely ephemeral and should be ignored altogether. But confronted with the actual realities of the business situation and the constraints imposed on investment—and this whole program was supposed to be directed toward the rebuilding of private investment—a pragmatic Federal Reserve would be in a position, with or without alterations in the targets, to address the realities rather than those paper theories.

To do that, I don't think imposing such restrictions on the Federal Reserve would work. I think we can all almost hear what the market would say if the Congress were to demand or require the Federal Reserve that it produce more money. I mean, that would fit a template of views that exist down there. Instead, the Federal Reserve itself should undertake to say, "we're not going to be as predictable as we have been in the past, we are reserving a necessary right to be pragmatic to confront the realities."

PRESENT TARGETS ARE UNREASONABLE

Representative REUSS. And I take it your testimony is that in order to exercise that right to be pragmatic the Federal Reserve has to release itself from the self-imposed corset in which it has laced itself. Is that not so?

Mr. SOMMERS. I think it has to release itself from the assurances it has provided to the financial community that its behavior will be predictable with respect to those targets. Now I don't think that necessarily means foregoing targets altogether, and as you said——

Representative REUSS. I wouldn't suggest it.

Mr. SOMMERS. The Fed wouldn't want that kind of open-ended situation, but it needs freedom to respond to the actualities without the market saying, "Oh, oh, here we go again"—which is the standard response. It needs to disabuse the market of the fact that its behavior relative to those targets is predetermined and predictable, and I think that would vastly improve the position of the Fed apart from the question of what the targets are.

FEDERAL RESERVE SHOULD ADMIT ERROR

Representative REUSS. As you explain it, I must say, it doesn't sound like a task that is asked of the Federal Reserve that would require sublime genius to accomplish. How do you then explain—since the Federal Open Market Committee is composed of 12 people, in my view, of honesty and integrity and intelligence—their refusal so far, with one exception, Governor Teeters, to confess error and to make a new start?

Is it the ancient infirmity of human beings in public life as in private not to want to admit that we've been wrong? That has caused a lot of trouble in many wars in the world's history. Could that be part of the explanation?

Mr. SOMMERS. Well, I think I share your high regard for the members of that board and the entire institution is as professional as any we have in government.

Representative REUSS. That's the paradox. How can these fine gentlemen remain so much in error?

Mr. SOMMERS. I don't know, Mr. Chairman. I think it is a puzzle. I think they are a little bit in the position—I think they feel themselves to be somewhat in a position of the sorcerer's apprentice, that departing from that rule is vacating a guide and that when it's vacated there are no guides left and that the interpretations of the freedom that it will have accrued to it as a result of vacating the guide would be interpreted wildly in financial markets.

ACCEPTANCE OF MONETARISM DEEPLY ENGRAINED

If they're going to attempt to restore its pragma, then they had better do it carefully, because it's astonishing the degree to which the U.S. financial market is dominated by monetarist reasoning. I'm always surprised by it. I think it's beginning to break up a little bit now since the cost of fidelity is turning out to be so high, but I would be curious as to whether my colleagues here share the view that it's a deeply engrained acceptance of the principle that inflation is exclusively a monetary phenomenon.

MONETARY POLICY IN GERMANY, SWITZERLAND, AND JAPAN

Representative REUSS. I note that each one of you witnesses has a good word to say about the monetary and economic policies pursued in the last 20 years by Germany, Japan, and Switzerland, thus suggesting that if you're in a war it's a good idea to lose it, and if you don't lose it, at least you should try to remain neutral and stay out of it.

Would any one of you care to dilate a bit on what some of these countries—Switzerland, Japan, or Germany—have done which could be instructive to us? Can we profit by anything they've done? Here I'm not asking about the obvious German economic miracle which has been much worked over or the Japanese productivity acts of genius, but particularly in the monetary field, what can you say? I know Mr. Hotson has done a good deal of study on this.

THE SWISS EXAMPLE

Mr. HOTSON. Yes, Mr. Chairman. I would like to hold forth a little bit on Switzerland. As I understand it, the Swiss have done the best job—and I think Mr. Wilmeth had some testimony about that. Switzerland and Japan both are totally open to world trade and have no oil of their own and therefore when the two OPEC price shocks hit them they were forced by their bad situation to be much more brilliant economists and social thinkers than the United States or Canada, who have a lot of oil of their own and use their wealth to be foolish in my opinion.

The Swiss, at the same time they were hit with the oil shocks, were hit by the fact that the Japanese had destroyed the market for their traditional watch industry with the electronic watch, and therefore they had to be very bright.

So the first thing we should give credit to, I think, is the Swiss workers who had given up the right to strike in 1937 and who accepted because of national emergency the pace of wage increases equal to one-half of the average productivity gain. I'm talking about the situation after about 1973 through about 1978 when they put in wage and price controls on top of this for general restraint, with the rock bottom restraint this restraint of wages. They also had agreement that dividends should increase no faster than wages were increasing and that the profits of corporations should be plowed back heavily into investment and into technologies to modernize Switzerland because they had to export or die.

They then set the interest rates at the lowest in the world. They're lending to their industries at 4 percent at a time when the world is going crazy with these high interest rates. They're focusing on productive investment. They're not allowing people to borrow money at 4 percent to speculate in the stock market and so direct credit controls is part of their success story.

They are also helped by the fact of having less inflation than anybody else. Having initially a very undervalued money, the Swiss franc rose on the foreign exchanges two and a half times the U.S. dollar over about 5 years so that they stopped importing inflation. So at the time when the franc was rising rapidly, the price of oil was not going up to the Swiss and the price of everything else was going down. It's one of the advantages of floating rates.

But what happened eventually was that their franc got so high it became very difficult to export and they had to bring the franc back down again and that ended their ability. They actually got rid of inflation in the year 1978, when the price index fell in Switzerland.

There's one aspect we can't copy. They could send foreign guest workers home. They maintain absolute full employment of Swiss citizens but they did ship out Yugoslavs and so on who were guest workers. The United States can't very well round up the Mexicans and send them home and I'm not proposing that.

It is instructive of what kinds of incomes policies in its broad sense we could be using.

Representative REUSS. Thank you very much.

Congressman Richmond.

HIGH INTEREST RATES IMPEDE MODERNIZATION

Representative RICHMOND. Thank you, Mr. Chairman.

Gentlemen, I've listened to your remarks. I'm a businessman and I've borrowed money all my life and built companies and what-not. Right now, it appears to me that we're faced with an inescapable fact: It is impossible for the average business man or woman to borrow money. With the prime rate at 16.5 percent plus a compensating balance, they're effectively paying approximately 18 percent for their money which, in my opinion, is the main reason why the average American corporation isn't modernizing as quickly as it should.

As you know, capital investment in machine tools is down 50 percent. Now if America is ever going to get out of the present recession we're in, we've got to become more competitive in world markets and more competitive in our own domestic market, and the only way we can do that is by putting vast amounts of money into modernizing plants.

So on one side you have capital investment down 50 percent, money costing far too much for anybody to afford to amortize their investment in machine tools in any reasonable time. As you know, the rule of thumb that most corporations use for amortization is 4 years before taxes. In other words, if you can't amortize a piece of equipment or some robot or some conveyor system that you're using over 4 years, you probably wouldn't buy it on a before-tax basis. Now with 18-percent interest, there's no way you can amortize it over 4 years.

I don't blame the Federal Reserve as much as everybody else seems to blame the Federal Reserve. I blame the Federal Government policy. It seems to me that if we could get the Government out of the credit markets by increasing taxes and balancing the budget we would then automatically drop interest rates and make money available for businesses to expand and modernize.

Now is my thinking too simple? Am I just being too practical about the whole thing? Why shouldn't the Federal Government reduce its deficit by raising taxes, particularly by imposing user fees for services which the Government now provides free or at less than cost? Why shouldn't all the users—corporations and the well-to-do, especially—who use Government services pay for them? Why should consumer interest be taxed? And why shouldn't we thereby reduce our deficit, reduce our constant demand—I understand over the next 6 months the Treasury will be borrowing $45 billion on the open market. That has to keep interest rates up.

We know American savings is only $200 billion a year and if we run this Government next year at a deficit which has to be $150 or $160 billion—the projected revenues will be nowhere near what we expected it to be. How are we going to get interest rates down?

Can anybody answer that?

PRESENT DEFICIT PROJECTIONS ARE DESTABILIZING

Mr. SOMMERS. I think all three of us would agree that the budget deficit that is visible in the present projections is a destabilizing deficit. It grows over time even on the assumption that the economy is growing. It's the first time we've ever experienced a disequilibriated deficit. Always in the past, no matter what kind of deficit you were running, if you went out 3 years you had an embarrassing surplus from the growth in Federal revenue that was then available for either new spending programs or tax reductions.

We're not in that position now and I do agree with you that it's urgent that the trajectory of that deficit over time be bent back down again.

Given the state of the U.S. economy, its present running deficit, which is about $120 billion a year now, will be about $160 billion after July 1, on account of social security and tax reduction. By the time we get to $160 billion, we are not running a cyclically respectable deficit. It's too big.

How it should be reduced, of course, is a matter of some concern to the Congress. I understand you've had some discussions on that subject and I won't offer a comment on it unless you wish me to. But a program leading to a substantial reduction of the deficit—the prospective deficit—is an obviously desirable thing and it would have considerable but maybe not total consequences for interest rates.

There are other reasons why the rates are high and resolving the budget deficit downward to a declining trajectory, I'm not so sure that that will resolve everything. We have a number of other conditions in the money market, most particularly the predictability of Federal Reserve behavior which will still be there, but it would be a substantially crucial and necessary step to relieve those rates, I believe.

Mr. HOTSON. Congressman Richmond, I agree with most of what you said, especially about the inability of corporations who can't earn 18 percent to borrow at 18 percent. But I'd like to answer the latter part of your question about the deficit in terms of table 3 of my prepared statement. Given where we are in the business cycle, if we want to get out of this depression, we're going to have to have quite heroic use of both fiscal and monetary policy, a herculean expansion of money and credit if we're willing to go for full employment in the way we did, say, in 1975.

THE GOVERNMENT'S ROLE IN THE CREDIT MARKET

Representative RICHMOND. It won't get the Government out of the credit market. Mr. Hotson, if we could get the Government out of the credit market, then we would have a herculean expansion for businesses.

Mr. HOTSON. I doubt it very much.

Representative RICHMOND. Why?

Mr. HOTSON. I think the way the economy is behaving, we would have much more a debt repudiation crisis; a real collapse of the system is a more likely result of raising taxes and cutting Government expenditures this year than any nice move upward.

If you look at my table, in 1975, which is a recession year, almost half of all the deficit finance in the United States was accounted for by the Government sector. That's very unusual. That's deep depression percentages. In good times, say 1968-69, 80 percent of all deficit finance was done by the private sector; as much as 88 percent was done by the private sector in 1969.

But when you come to a depression situation such as we're in—where 32 and 34 percent of deficit finance is Government—and consider that it's getting worse, we need the blastoff that the Government borrowing gives, but we need that at low interest rates.

If you go back to my figure 3, what we really need in terms of directions is to move not into a Hixson's helix there to maybe 30 percent of gross national product being borrowed and spent, but we need to move off in the northwest direction. We've been going off more and more to the northeast which is heading toward hyperinflation. That's very undesirable. Now we're going off to east-northeast into deep depression. That's highly undesirable.

BALANCING BUDGET WOULD BE "DISASTROUS"

What we need to do is move to the west—maybe northwest, into this area around the kind of figures we had in 1973-74; or even due west is where we need to move. To move in that direction when everything has been going in the other direction is going to take more than just a little tinkering with monetary and fiscal policy. I think it would be disastrous to try to balance the budget this year and go from $120 billion deficit to zero—we'd be back to the 1930's. We're forgetting everything Keynes taught us if we followed through with this theoretical "balance the budget, no matter what."

Representative RICHMOND. You mean to tell me that if we substantially reduce Government deficits, substantially reduce Government borrowing, we wouldn't then substantially improve the commercial outlook for the Nation's businesses to go ahead and borrow money?

Mr. HOTSON. We could lower the interest rates but we'd also be lowering aggregate demand very greatly and pushing the economy into deeper depression. All experience shows that business people will borrow and expand if they see the market is there to do that.

Representative RICHMOND. But right now business people can't afford to borrow and expand whether the market is there or not because we all agree that at 18 percent it doesn't pay them.

REAGANOMICS HAS "BOMBED OUT"

Mr. HOTSON. I agree with that. A very tight monetary policy and a somewhat loose fiscal policy, which is what supply-side Reaganomics is all about, has bombed out. It hasn't worked. But I don't think the solution is to have a tight monetary policy and a tight fiscal policy which I interpreted you as asking for.

Representative RICHMOND. The average American corporation, if it makes 10 percent before taxes, considers itself doing quite well.

Mr. HOTSON. Absolutely, and it's being destroyed by these high interest rates.

Representative RICHMOND. And with the high interest rates there's no way you can show earnings.

Mr. HOTSON. I totally agree. But given the situation we're in right now, we need both an easy monetary policy and an easy fiscal policy if we're going to go off into the Hixson helix spiral of good times again. If we're going to do something better than that, we need very low interest rates.

Representative RICHMOND. That type of policy would make for more inflation which would make our goods even less attractive for export.

HEADING FOR ANOTHER "GREAT DEPRESSION"

Mr. HOTSON. If all we do is go through the cyclical pattern, we're heading into a hyperinflationary disaster. I'm not advocating that. I'm advocating that we design new policies to get interest rates down and move west—go west young man.

Representative RICHMOND. I think the quickest way to do that is for the Federal Government to lead the way.

Mr. HOTSON. Yes; absolutely. Without Government leadership, without some new ideas being used by the Government, we're in very bad trouble. We're heading for—what Reaganomics is heading us toward is—another Great Depression.

Representative RICHMOND. Right, if we're not into it already.

Mr. HOTSON. If we're not into it already.

Representative RICHMOND. We have John Deere's earnings off 97.6 percent. That's the finest company in the world in its field. We have Caterpillar with virtually all of its factories closed right now, and again it's the finest company in the world. There's no better company in the world than Caterpillar for the stuff they make. Its factories aren't working this month.

Mr. HOTSON. And, of course, in addition to all the bankruptcies in corporations we have international bankruptcies threatening all the time—Poland, Argentina. We are in very serious trouble and just simple monetarism or just simple Keynesianism is not sufficient to solve the problems.

Representative **Richmond**. Mr. Wilmeth.

WE NEED A CAPITAL BUDGET

Mr. **Wilmeth**. I think you probably have some points here. There are several things in these interrelationships that we sometimes overlook. If a utility wants to build a new powerplant and if that utility uses the same accounting that is used in the Federal budget, that utility would have to raise its rates enough to pay cash for the investment in that plant as it was built. We sometimes forget the full implications of this outdated accounting used by Government.

If the Federal budget and all State and local government budgets used conventional accrual basis accounting in which a part of the expense was represented by capital consumption, and of course the other expenses would be the conventional ones, then it would be sound for those governmental units to tax enough to balance their accrual basis expenditures.

Representative **Richmond**. Mr. Wilmeth, I dispute that because a third of the Government expense is for defense and nobody in his wildest dreams would try to capitalize a battleship or any type of defense mechanism, right? There's no capital value. That's a third. A third of Government expenditures are for entitlements. You can't capitalize that.

So there are actually very few Government expenditures which can be legitimately capitalized using good accounting practices.

Mr. **Wilmeth**. Out of the total tangible wealth of this country, the Commerce Department estimates are that a little over 20 percent is owned by the various levels of government.

GOVERNMENT INVESTMENT HAS COLLAPSED

Now we know that in recent years the net rate of investment by State and local governments has practically collapsed. It has collapsed faster than capital investment by the private sectors.

I think we have a pretty good idea as to why this has happened, too. Now if at all levels of government accrual basis accounting were used and taxes were raised to pay accrual basis expenses, if then, a capital investment budget separate from the expenses budget could be financed partly by retained profits of government under which they taxed a little more than their accrual basis expenses, then the balance should be financed by debt. What we sometimes overlook is that one person's debt is another person's bank account.

REDUCTION IN FINANCIAL LIQUIDITY

In the post-World War II period, there has been a progressive reduction in the financial liquidity of every private sector. That reduction in liquidity has taken place because of a major shift in the liability structure by sector of the economy.

Federal debt that was equal to $1.20 per dollar of GNP at the end of the Second World War has been reduced by over 75 percent. It's about 27 cents per dollar of GNP today. Total debt as far back as we have good data, which is approximately 60 years, has been relatively stable at about $1.40 per dollar of GNP.

Now as the proportionate amount of Federal debt has declined—Federal debt that was providing private liquidity, private bank accounts—all of that decline has been replaced by a disproportionate rate of increase in private debt. The result is that you can take the balance sheet data, the consolidated balanced sheet data, for any of the private sectors of the economy and you can see a progressive deterioration in the ratio of financial assets to net worth, in the ratio of financial assets to financial liabilities, and in net financial assets.

In the immense nonfinancial corporate sector, at the end of the Second World War, that sector as a group in their consolidated balance sheet had approximately 50 cents of liquid assets for each dollar of total liability, short-term debt and long-term debt. Today, the corresponding figure is 13 cents.

Well, I have a private business that my family started about 30 years ago. We would no more consider a major expansion if our financial assets were only 13 cents per dollar liability. We would be running for shelter at this point. Well, that's not our position. We're extremely solvent and we're able to finance expansion.

But any proposal to disproportionately increase private debt beyond its present astronomic levels and to increase the profit margins of Government across the board so that they can finance their investment out of retained taxes and excessive expenses is a proposal to further reduce the financial strength of the private sectors.

It would appear in the very short run that a reduction in the rate of the Federal deficit would contribute to a reduction in financial pressures in the credit markets. That is true, but it represents suboptimization. It is the wrong way to get interest rates down. It is a path to disaster.

RESTORE THE ECONOMIC SIZE OF THE MONEY SUPPLY

The alternative is to begin to restore the economic size of the money supply. Switzerland was mentioned a few minutes ago. Switzerland has approximately three times as much narrow money per dollar of gross national product as the United States. Japan has approximately twice as much. It's the long continued reduction in the economic size of our money supply that is the basic reason for these extremely high interest rates today.

Now it's easy to make the Federal Reserve the culprit. I have a great deal of sympathy for the Federal Reserve. They have not been assigned the responsibility to control both aggregate credit expansion and narrow money, nor do they have institutional authorities in place to permit them to do the job that is needed.

I think basically that there is no substitute today, if we want to avoid a full-scale deflationary depression; I believe there is no alternative to facing up to the need for a more sophisticated and more comprehensive system of control of money and credit so that we can go to work to get both interest rates and inflation rates and unemployment rates down. I see this as an achievable goal but it requires a new kind of understanding of how the interrelationships of our complex market economy feed back on each other.

ADVANCE IN U.S. ECONOMIC THEORY PREDICTED

I expect in the next decade to see more advance in economic theory worldwide, but particularly in the United States, than we have seen in the last century. And it won't be because any of the present day economists are any smarter than the economists a quarter century ago or 50 years ago. It will happen because our data base is expanding tremendously because we have the computer capacity to analyze these interrelationships and because we even have such simple devices, once you get used to them, as plotting equipment that can take time series out of a computer data base and draw very complex charts of it so you can experiment with different relationships.

I see no possibility of a satisfactory outcome to our present impasse through any of the policies that emerge out of the kind of traditional economic theory which is still predominant in the textbooks and in our graduate schools. It simply does not recognize enough of the linkages in our economy to permit responsive judgmental decisions.

Representative RICHMOND. Thank you, Mr. Chairman.

BUDGET DEFICITS AREN'T ALL THAT BAD

Representative REUSS. To round out Congressman Richmond's questioning, I think Mr. Sommers wanted to say something.

Mr. SOMMERS. I just wanted to comment on this budget paradox. We're not alone in facing it in this committee room. The level of understanding of the relationship of budgetary policy to the system as a whole is poor and the dogma are not satisfactory guides.

What has happened right now, I believe, is that the problem has been greatly complicated by the fact that we have been given too much of a good thing. I share Mr. Hotson's view—and I think Mr. Wilmeth does too—that trying to balance a Federal budget from the position we are in now runs very, very high risks. And the whole economics profession which in the past has been conservatively dedicated to a balanced Federal budget is changing. Even a Republican Council of Economic Advisers has argued that these budget deficits aren't really all that bad.

The fact that the deficit rises over time, I think, poses a genuine threat. That's simply too much of a good thing.

THE JAPANESE EXAMPLE

Representative RICHMOND. Mr. Sommers, our deficit is not a productive deficit like the Japanese deficit—as you know, their government runs a huge deficit also—pays for such things as national health, the finest railroad system in the world, all types of productive, constructive items. And it's paid for by the Japanese people in the form of half their savings which go into savings bonds that are tax-free to them, but on which they get 5.75-percent interest. That deficit I believe is a healthy deficit.

If we in the United States could reduce interest rates to where the Government was functioning at 5.75 percent, I think we could live with it while creating a better climate for all the people in the United States. Better highways, transportation, education, and—

what the Japanese are using their money for—national health insurance. We're running our deficit at huge interest rates, and much of our deficit is a relatively wasteful deficit. It's not producing goods and services the way the Japanese deficit is, and that's what bothers me.

Mr. SOMMERS. Well, that's a matter of composition we choose for our spending.

Representative RICHMOND. Well, the fact that our highways are in the most deplorable condition——

Mr. SOMMERS. That goes to Mr. Wilmeth's point that the reason those highways are in such deplorable condition is——

Representative RICHMOND. Is because we haven't increased highway user fees since 1954.

"LIPSERVICE" TO A BALANCED BUDGET

Mr. SOMMERS. It isn't just the amount of user fee. It's the fact that our Federal budget has been misdirected in terms of its spending because it's been caught between two forces—the lipservice to a balanced Federal budget which remains a politically very salable article. There's an article in Fortune magazine, I think the latest issue, on the fact that the U.S. citizenry has voted for a balanced budget on the moralistic analogy to the idea that a family should live within its income and a business should and so on. Of course the Federal Government is a totally different kind of animal.

But we've had political lipservice to a balanced budget, on the one hand, and enormous growth of transfers on the other hand, and the way to reconcile them has been to shrink the purchasing rate on the very things that only Government can buy for us—which includes roads and railroads.

Representative RICHMOND. Well, I maintain that if we had been adjusting that user fee to inflation we'd now have 15 cents per gallon for the highway user fund instead of 5, and it would be more than enough to put the bridges and highways of the United States in decent shape.

Mr. SOMMERS. I was addressing merely the fact that a balanced——

Representative RICHMOND. At 14 cents per gallon, that would be about $8.6 billion, incidentally.

Mr. SOMMERS. If we're going to be reasonable with the economy and with the private sector, a balanced budget is a great distance off in the future.

Representative RICHMOND. A balanced budget, I think, is an impossibility, but a severely reduced deficit is a possibility.

Mr. SOMMERS. Exactly, and that was the point I was trying to make. This is too much of a principle that I would adhere to generally, but the size of the deficit is an overwhelming influence on the interest rates that we're all interested in getting down.

Representative RICHMOND. Thank you.

EXPENSE VERSUS CAPITAL INVESTMENT BUDGETING

Representative REUSS. I'll discuss later your accounting view about bridges, ports, railroads, utilities, because I think we have to get a better system of sorting out in public sector budgets that which is for current expenses and hence ought to be subject to budget-balancing exercises and that which is for capital investment.

Representative RICHMOND. Such as highways and bridges.

Representative REUSS. Such as highways and bridges. Our bridges are falling down, and I can't help but think that a bridge that doesn't fall down is a valid expenditure. If you could get private people to build bridges, that would be fine, but until they do the public has to build them, and public or private, they're capital expenditures. I want to pursue this a bit with the panel because I think it's interesting.

SHOULD THE FED CONTROL CREDIT GROWTH?

First, let my address myself to Mr. Wilmeth and ask Mr. Sommers and Mr. Hotson if they're prepared to comment on what I believe to be Mr. Wilmeth's point.

Now, it is your view, I gather, Mr. Wilmeth, that the monetary authorities have been creating too little narrowly defined money, that is, that which pretty soon can be a subject of a check that somebody writes, cash or its equivalent; and that too much total credit has been created, that there's a mismatch, an imbalance. What needs to be done, and you set forth in an appendix some ways to achieve this, what needs to be done is to impose some controls over the growth of total credit, including largely credit of a non-M_1 nature, which would mean commercial paper issued by corporations, long-term borrowing by corporations through the bond market, various forms of consumer finance.

So am I right that you are saying that just as the barber "surgeons" of 100 years ago practiced bloodletting because that was the only medical game in town with sometimes disastrous results for the patients, today by reason of Congress improvident directions to the central bank, the Federal Reserve is forced to practice a modern version of bloodletting, that is, total attention and overattention to narrow money and no attention to the overall growth of credit? This, you think, is a mistake and should be rectified.

Now please set me straight if I misunderstand you because I think you've said something of importance to us.

Mr. WILMETH. I think that was very close. In order to restore the economic size of the money supply; in order to reduce what I call the monetary policy index, the ratio of new debt per dollar of money; in order to increase the proportionate size of the money supply with our present monetary control mechanism—it's necessary to have a deflationary depression.

I would expect it might take as much as a one-third decline in the average price level under conditions of perhaps 15 to 25 percent unemployment over a decade in order to make it possible to increase the size of our money supply from about 13 cents per dollar of GNP to the area of 25 to 30 cents per dollar of GNP.

Now Japan is currently in the 25 to 30 cents area. Switzerland is up more like 45 cents.

Obviously, a depression which is in effect a replay of the 1930's is not just impractical, it's completely out of the question.

YES—IT WOULD CUT INTEREST RATES QUICKLY

Representative REUSS. Therefore, you say we shouldn't rely on squeezing the narrowly defined money supply until it hurts and doing nothing about the overall growth of credit. Would you tell us what forms of credit are now growing which aren't included in the money supply and why that mismatch is bad for the economy?

Mr. WILMETH. There are substantial frictions between ultimate savers and ultimate borrowers. Financial intermediaries lubricate the function of saving and borrowing. If the issuance of near money by financial intermediaries—near money in the sense of every king of liability of deposit institutions which pay interest—secondary securities, you could call them deposits, certificates of deposits, small denominational, large denominational certificates of deposits, overnight repos, term repos—if there were an independent ceiling on the rate of increase in the stock of near money, that would prove to be an intermediate target I believe that would permit the Federal Reserve to restrict total credit expansion.

They would not have to become involved in the end use of credit. They would simply put a ceiling on the aggregate amount. Incidentally, in Japan they have a system of quotas now for their different groups of banks on rate of increase in bank credit because they have a more monolithic banking system than we have—so in effect, Japan quite clearly has a dual control mechanism now and they did things in the early 1970's in cutting down inflation that would be completely impossible in the United States with our limited control system.

HOW? RESTRAIN GROWTH OF NEAR MONEY

If we had in place a restraint on the issuance of near money by the key intermediaries, we could then expand the monetary base, create excess reserves in the banking system. The banks would loan out those excess reserves. The recipients of them would try to put them back in the banks, and the banks would be restricted on how much they could issue on new interest-bearing liability.

That would put very substantial downward pressure on interest rates quite quickly. I think if such a system were inaugurated that we could see short-term rates in single digits within 60 days. I think long-term rates could be in single digits within 12 months and that from that point on we could have a gradual, progressive decline in interest rates that ultimately would restore them to the levels that permitted reasonably full utilization of resources at reasonably stable prices.

I see no alternative, no attractive alternative, to facing up to the need for this increased discipline in the money and credit system. If we continue to let market forces provide the basic discipline over credit expansion, we're going to pay a very severe price for it.

Representative REUSS. As you survey our current bleeding economy with more than 10 million unemployed and a distressing rate of bankruptcies with ominous clouds ahead, what is getting credit that you don't think should? You pointed out that you think there's not enough M_1 and too much non-M_1 credit. What is it that non-M_1 credit is doing that's bad and should be restrained?

EXCESS BORROWING

Mr. **WILMETH**. There's a lot of just plain excess borrowing. You see, there's a difference between the growth of borrowing and the net increase in debt. That difference is the repayment rate of existing debt.

Nonfinancial business interest payments today are approaching 10 percent of national income. Thirty years ago it was barely over 1 percent. There's no way that business can afford that level of interest under conditions of stable prices.

We have followed a simplistic monetary policy to the point today where we have a sharp reduction in inflation rates, but interest rates cannot follow those inflation rates down under current conditions except under conditions of a collapsing capital investment. There is a major imbalance today between the ongoing rate of capital investment, low though it is, and the level of real interest rates. Major investment projects of the kind that take 3, 4, 5, 6, 8 years for completion are maintaining the present rate of capital investments, but new projects are not coming online at the rate the old ones are being completed.

PRESENT INTEREST RATES INCOMPATIBLE WITH RECOVERY

The typical recessionary forces of an ordinary business cycle have pretty well run their course, but these longer term forces leading to what could become a major depression have not run their course. Real interest rates today are simply completely incompatible with a healthy resumption of expansion in this economy.

PRESENT INTEREST RATES AGGRAVATE DEFICITS

In respect to the Federal budget, the projections of rising deficits are very severely impacted by present levels of interest rates on Federal debt and present levels of welfare expenditures generated by unemployment, plus the reduced tax income generated by low utilization of resources. A solution to the basic economic problem will turn that budget problem around.

I am much more concerned over expenditure levels as a percent of full employment GNP in the Federal budget than I am over the immediately prospective level of deficits.

NONPRODUCTIVE CREDIT

Representative **REUSS**. On this general question of money versus credit which you are pursuing, Mr. Sommers had something to say on that. Here I read from his list of what ought to be done, in his prepared statement, in which he says that a more sensible program than the one now in place "would incorporate wider techniques of credit management intended to favor the availability of credit for investment while discouraging its availability for consumption, speculation and takeovers."

I find it very hard to quarrel with the commonsense of that observation to the extent that our national stock of credit is used for less than productive purposes. It obviously means that we aren't putting into place the new productivity-enhancing, investment-increasing, job-creating things that we need.

My question is: Are your observations on the need to encourage the best use of the Nation's stock of credit different in substance from the sentence by Mr. Sommers that I just read?

Mr. WILMETH. There might be some degree of difference. I believe that if we got interest rates back down the way we should, repayment rates on existing debt could increase sharply. That would mean that a higher level of growth borrowing would be possible for any net rate of increase in debt.

Now in the 40 years I've been observing our cyclical variations, I've watched our housing industry expand and contract any number of times in ordinary business cycles. Now the housing industry is a very important industry. It's a tremendously inefficient way to operate an industry as important as that, to cause a third of the participants to go bankrupt every 3 or 4 years.

CONCEPT OF SUSTAINABLE FINANCE

If we had responsible controls in place over credit expansion and if we restored the economic size of the money supply to start a progressive reduction in interest rates, we could largely wipe out that kind of cyclical fluctuation. We need to develop a concept of sustainable finance. If we did that, the added efficiencies we would get out of important industries that are so cyclical today would be a major contribution to our productivity gains.

I see some very hopeful prospects if we will just take the time to reevaluate some of these premises that we've grown up with and look at the new interrelationships that are now viable and go to work to get the Government to do the things that can only be done through Government and then turn the private economy free to do the things that they do so well.

LARGE INTEREST PAYMENTS DISTORT INCOME DISTRIBUTION

Representative REUSS. Mr. Wilmeth has made the point, among many others, that interest payments now make up an extraordinary part of the incomes stream. I think it was Mr. Hotson who suggested that since interest payments largely or entirely go from borrowers to creditors and since creditors tend to be better heeled than borrowers by and large, this results in some income distortions and may predicate an outside demand for wage increases on the part of workers because workers by and large are somewhat different people from lenders.

HIGH INTEREST RATES LEAD TO HIGH WAGE DEMANDS

Is that an accurate statement, Mr. Hotson, of what you were driving at? That among the many other reasons for wanting lower interest rates is that high interest rates cause distortions of relative incomes and thus a demand for higher wages that in itself can augment inflation? Would you take it from there?

Mr. HOTSON. The short answer is yes, I agree very much with what you said. Is that all you want, a short answer, that, I agree? That's what I was saying.

Representative REUSS. Short or of modest length.

Mr. HOTSON. Well, there's no real need to elaborate on that. I think it makes for excessive wage claims when they see this high income group increasing their incomes very rapidly. Why should they exercise restraint when net interest has gone up 70 times since 1950, personal interest income up about 35 times and so on? And if they're told that they'are 13 times higher wage increase is excessive, it's nothing like 70 times. All kinds of things have been going on here which I really just want to reinforce.

MORE DISCUSSION OF A CAPITAL BUDGET

The Federal deficit is mostly interest, almost entirely interest. And if we get the rate of interest on the Federal debt down, then we would shrink the deficit in a way that wouldn't take the money away from fixing the bridges and so on and in fact would do something else because we wouldn't be paying it out as interest.

Regarding the point Mr. Wilmeth is making that we ought to have a capital budget, the originator of this tax bond proposal I put out really stressed that point, that we could borrow against the lump of government assets at the State and local as well as the Federal level with these low-interest tax bonds while at the same time giving large tax cuts to put the government sector more on a business-like basis. This would be a way of also selling it to the public—this is not just financing current consumption of the government sector, but these highways and these bridges and airports are real capital assets and they shouldn't have been financed on a cash basis. No sensible public utility would finance its heavy capital investments that way, the way we've asked the government sector to do it.

Representative RICHMOND. Do other governments do it?

Mr. HOTSON. Yes. The Canadian Government has a capital budget. It has a better accounting system than the United States.

Mr. SOMMERS. The United Kingdom has a capital budget.

Representative REUSS. It's a commentary on the way we do things that both in monetary and in fiscal policy today, by adopting unrealistic and mythological goals, we tend to scare the daylights out of the capital markets and compound our troubles. What I'm talking about is what you gentlemen have been talking about; namely, in monetary policy, when the Fed seeks to placate the monetarists by adopting a 2.5- to 5.5-percent target and then grotesquely goes beyond it in its actual money creation, of course, it spooks Wall Street, the Dow Jones average, the bond markets and business confidence and everything else, and accentuates the recession.

When the Congress dedicates itself to budget balancing, constitutional amendments and such with total disregard for the fact that some part of the Federal budget is in fact capital investment in physical goods—and I would even include battleships, although I'm not particularly militaristic, as a capital investment which ought not to be included in that part of the budget which pays the help on Saturday night—Congress, by paying lip service to a false god of a balanced budget which has nothing in it to recognize that part of the budget is for capital expenditures, also creates its share of spooking the markets, because the markets are sensible enough to know the Congress' pretensions of balanced budgets, whether by constitutional amendment or anything else, are sheer hogwash until and unless it does adopt some method of sorting out that which is capital and that which is operating expenditures.

Would you agree that this pursuit of mythological false gods in both monetary and fiscal policy complicates the problem of getting out of the recession?

Mr. SOMMERS. I certainly do and I think that's a very important aspect of where we are in this evolution of this system, that we retain a historical American fear of power and responsibility in government. The Federal Reserve would prefer to have a rule that relieves it of the necessity of confronting pragmatically what the problems are.

The principal reason we do not have a capital budget—and I share the general impression here that it's an excellent idea—is the fear that the distinction between a capital item and an expense item will be abused in the Congress and that we will get a continuous expansion of the definition of capital items. For example, education and training of the work force in this context could conceivably be thought of as a capital item. It's an investment that should pay off in efficiency over a long period of time.

We could avoid a capital budget altogether because we fear the responsibility of making and living with a sensible distinction. Or we can take the risk and say, well, this is our world and our country, and we're going to have to manage it, and we need this, and we'll take the political risks of some degree of abuse. After all, we're achieving a $250 billion deficit without benefit of a capital budget, so we're capable of making a lot of mistakes even it we don't have a capital budget.

I guess it's obvious from those remarks that I do favor a capital budget and if you gentlemen are interested, I've done a large article on the advantages and disadvantages and rewards and dangers. I'd be happy to send you copies of it.

Representative REUSS. We are and, without objection, that article is cordially invited and will be printed at this point in the record.

[The article referred to follows:]

[From Across the Board, May 1982]

THE FEDERAL BUDGET SHOULD BE REBUILT FROM THE GROUND UP

(By Albert T. Sommers)

The Federal Government needs a capital budget. It should separate expenditures into current operating costs, financed by current income, and capital outlay, financed by debt issuance when necessary. Such a system "would say, loud and clear, that more current operating spending means more taxes." It would provide the necessary mandate for government to meet its own crucial investment requirements for defense, and for the rebuilding of the nation's deteriorating infrastructure of public capital. But to achieve all this, a wholly different view of Federal budgets, Federal deficits and Federal debt is required.

Among all the measures of economic conditions that bear on the deplorable state of business in early 1982, the present and prospective deficits in the Federal budget are far and away the most widely discussed, and the most generally blamed. The rising trajectory of Federal financing requirements is said to have driven up interest rates, threatened the thrift institutions with total destruction, interrupted planning for urgently needed investment in plant and equipment, drastically lowered the rate of housing construction, multiplied bankruptcies among smaller companies, and precipitated near panic on Wall Street. The prolonged period of extremely high interest rates, attributable in considerable degree to the prospective borrowing requirements of the Federal Government, has contributed to a general recession that is costing hundreds of billions of dollars in lost output. All this, only a year after Congress passed and the President signed an immense tax-reduction bill that reduces Federal receipts by about $700 billion over the next several years. The tax reduction was supposed to be associated with a balanced budget by fiscal 1984; but the deficit is now at an annual rate in excess of $100 billion, and rising. A balanced budget by 1984, or for that matter in any foreseeable future, has disappeared beyond the horizon.

Budget experience in the past several years has been spectacularly irrational. Forecasts, still dutifully assembled each year, as required by law, have become a subject for grim humor. Federal budgeting itself, unencumbered by any real agreement on what it all means, is being made in an analytical vacuum. Opinions about the proper direction of the budget, absent logical restraint, drift randomly, attracted only by political pulls; it is an unfunny paradox of 1982 that a conservative Administration is defending massive deficits, while liberals urge measures to reduce the deficits. At a time of sharp recession, almost all parties agree that it is necessary to reduce spending and raise taxes—the precise flip side of the Keynesian consensus that prevailed in the United States only a half-dozen years ago; but there are no widely accepted guides to where the spending reductions should be made, or what a tolerable deficit would be.

The Federal budget is simply out of control; worse, there is no longer any consensus on what budget outcomes really mean, and what kind of outcomes can rationally be sought in a modern democratic society characterized inevitably by large government responsibilities. The budget projections calculated by altogether responsible sources clearly require action.

But what kind of action? The conflicting responses to this question reflect conceptual doubts about what Federal budget outcomes really mean, and a seriously flawed accounting system from which budgetary conclusions must be drawn. The time-honored conventional view leads us to strive for a literally balanced aggregate Federal budget as the only "fiscally responsible" outcome; but it virtually guarantees that the goal will be missed by a mile, *even while we underspend on precisely the things we need government to buy for us.* The budget projections say that budgetary restraint is now unequivocally necessary. But if restraint requires a further round of spending reductions, it is desperately important for us to rationalize the criteria by which we appraise the course of Federal spending, and to improve the accounting structure by which the government plans and records its own operations.

The conceptual structure of Federal accounting is woefully inadequate in many respects, but most seriously in its failure to distinguish a capital account from its ongoing operations. Under present accounting practice, the Federal government makes no distinction between one expenditure and another. Unlike a business, it treats its capital outlays as ordinary expense, including their purchase in its operating statement, setting up no depreciation reserve for their replacement, and calculating no net worth as the security against the government's debt. While special analyses in the budget identify some spending as of a capital nature, the analyses are retrospective, and have no apparent influence on the planning of government outlay. A purchase of long-term assets adds to the deficit; a sale of assets reduces the deficit. If the same accounting practices were pursued by businessmen, the fastest growing and potentially most successful businesses—those that are investing more than their depreciation charges—would show a deficit or markedly lower profits, while declining businesses that are investing less than their depreciation charges would show higher profits. For AT&T, for instance, conversion to government accounting would have reduced 1981 profits before taxes from $19 billion to $9 billion; for IBM, the reduction would have been from $9 billion to $2 billion. Both companies would have had to cut their capital outlay by about 50 percent to achieve their 1981 reported profits before taxes. Most small, fast-growing, high-technology companies would report totally illusory deficits year after year. In such an accounting structure, a company that sells a subsidiary, even at far below its book value, would show a tidy profit on the transaction. The Federal deficit is conceptually equivalent to the change in its outstanding debt. By this measure, AT&T has run a sizable deficit in every recent year.

To order its priorities and stabilize its finances, the Federal government needs a capital budget; that is, it should separate expenditures into current operating costs financed by current income, and capital outlays financed by debt issuance when necessary. Discussions of capital budgeting for the Federal government have always been heated, because the proposal seems to imply a loss of control over spending, and a legitimization of continuing deficits. The risk is real; adoption of a capital budget would admittedly alter the constraints over government spending, in that it would compromise the simple, moralistic argument that government should "live within its means" and should stop the growth of its outstanding debt. But the presumed virtues of a balanced aggregate Federal budget and zero growth in Federal debt rest on highly imperfect analogies to private-sector institutions—the corporation, and the family. And even these institutions are not expected to be (nor are they) virtuous in the rigid and inflexible way we seek to impose on government. (Until very recent years, business debt and personal debt have risen far faster than Federal debt.) There is a powerful commonsense case for capital budgeting; it should not be rejected for reasons of misapplied moralisms. Nor should it be rejected because prospective deficits are intolerable; those prospects reflect the dwindling relevance of a dying budget orthodoxy.

Capital budgeting would recognize the unalterable fact that modern governments, like modern corporations, confront substantial investment needs. Capital budgeting would not encourage a larger *aggregate* public deficit than we in fact experience. Its immediate consequence would be to strengthen legislative attitudes to withstand political demands for still further growth of current transfer payments, which are absorbing a larger share of Federal outlay, even in the Reagan budgets. Because it would direct attention to the long-run development and efficient use of the U.S. asset base, it should achieve more success with inflation than the dedication (always unfulfilled in fact) to an aggregate budget balance. Capital budgeting would thus respond to the two largest economic problems confronting the United States in the 1980s—how to restore a high rate of private and public fixed investment, and how to control inflation. If we are serious about solving these problems, and we should be, we would do well to free the Federal government from the futile aphoristic economics by which it is now constrained, so that it can participate in the effort:

To reap the benefits of capital budgeting, however, a wholly new view of the role of the Federal government in the economic system, and a wholly new set of accounting principles, will be required. The fact that the Federal accounting system includes no capital budget has an obvious bearing on the size of the officially measured "budget deficit," and the consequences that flow from its interpretation. For an understanding of the forward step that capital budgeting offers, it is necessary to examine—objectively, nonmoralistically, nonideologically—the fundamental principle on which conventional budgetary policy still rests: namely, that a *total* balance of *total* revenue and *total* expenditure is the only "fiscally responsible" budgetary outcome.

While long-term budget projections under Democratic and Republican Administrations alike always look toward a future balance, the actual budget has been in deficit in 24 of the last 30 years, and in every year since 1970; in the last seven years the deficit has averaged about $50 billion annually. It is revealing that virtually every developed Western economy has had the same budgetary experience. In fact, the U.S. deficit this year, expressed as a percentage of natioal output, is likely to be among the smallest of the OECD countries. In 1979, both the total public-sector deficit (including state and local governments) and the Federal government deficit, expressed as a percentage of GNP, were at half the level of West Germany's. In Japan, the relative deficit was three times ours, and the deficit of the total public sector more than five times ours, as calculated by the Bank for International Settlements.[1] *In the U.S., as in virtually all Western economies that have shared in our political and cultural experience, a conventionally balanced Federal budget no longer appears to be consistent with high employment, and may be impossible to sustain at any level of employment, unless substantial government responsibilities acquired over the past two decades are largely abandoned.*

There are at least two basic reasons for this developing experience. In the first place, transfer payments now dominate Federal budgets; and transfers are not nearly so stimulative to private activity, and hence to the broadening of the tax base, as real government purchases from the private sector. Such real purchases—for bridges, roads, ports, mass transit—produce a stream of jobs and incomes, and hence tax revenues; the transfers, which feed directly into consumption, have much smaller and only indirect effects on jobs and the tax base. In the days when government was much smaller and Federal outlays contained a high percentage of direct purchases, it was difficult to run a Federal deficit for any length of time. (The immense deficits of World War II were the result of deliberate suppression of the tax base and of consumption by wage, price, credit and production controls.) At present, in the U.S. as well as throughout the West, it is almost impossible to avoid one.

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[1] In seven major industrial countries budget deficits now average 4 percent of GNP.

Restraining transfers, and expanding real outlays, would contribute to a reduction of the deficit; capital budgeting would help in that effort.

Second, the dedication to a balanced aggregate budget fails to comprehend the long postwar development of debt formation. In the early postwar decades, private debt was rising rapidly in the United States. Hitorically, total public and private debt rose along with total GNP, and the energy provided by the recovery of private debt helped to maintain the system near high employment with no help from public debt formation. In the decade ending in 1957, the budget was actually in surplus more than half the time (the deficit years were mainly those of the Korean War; wage and price controls again). But the debt-carrying capacity of the pricate sector has been leveling off for more than a decade, and the withdrawal of energy has induced the growth of public debt—probably inevitably, but also as a cosequence of deliberat efforts to keep the system near full employment. *In the 1970s most Western economies arrived at a great postwar conjuncture; the simultaneous presence of large government, and a mature debt burden in the private sector.*

In the last 10 years, efforts to stop arbitrarily the growth of public debt have periodically weakened the system, and augmented recessions. All of the last three recessions occurred in the presence of a brief near-balance in the aggregate Federal budget; the ensuing recessons drove down private activity and hence tax receipts, and hence led to an augmented deficit in succeeding periods. Wild swings in the aggregate budget position, from close to neutral to deep recession-induced deficit, have been characteristic of the system's performance ever since the late 1960s, and have imparted to it a destructive instability in demand, and in interest rates, that impairs the private sector's ability to plan long-term investment. *There is absolutely no evidence that the political dedication to an aggregate balance in the Federal budget, under present accounting, has had any effect at all on the average budget deficit over the past decade.* And under present accounting, there is very little likelihood that any Administration will balance the total budget, for any significant period, in the foreseeable future.

Not only is a *general* budgetary balance most unlikely—it should not even be *sought* by the Federal government, any more than by successful corporations serving a growing market. It is the wrong target, and the error is grievously costly. The burden is borne heavily by U.S. business, which has had to do its long-range planning in an unpredictable and unstable financial environment, periodically featuring prohibitive capital costs, and in the presence of deteriorating public facilities.

In the absence of an accepted distinction between Federal expenditures with long-run importance and ordinary operating outlays, the futile effort to balance the budget disastrously misdirects the attention of both spending and tax policy. Given the fact that many of the ordinary outlays, including transfers, are mandated by existing legislation, the effort to curtail expenditures in the direction of a budget balance is inevitably deflected toward precisely the public capital programs that are urgently needed as infrastructure for the private sector's investment (not to mention the private sector's quality of life). Lacking an accounting protection for capital outlay, the Federal effort to control deficits is producing a disguised and unintended liguidation of the public infrastructure, a continuous accumulation of deferred maintenance that is grossly apparent everywhere in our public sector—including, of course, in our defense establishment.

Public capital formation has now subsided to about its lowest share of total output at any point in the post-war years. school construction has slowed—appropriately enough, with the decline in the school-age population. But the misdirected pressures to economize account for a 10-year liquidation of much of the U.S. defense system. Even if schools and defense are excluded from capital outlay, the remaining nondefense public-capital formation has taken less and less of our GNP. Outlays for highway construction fell after the completion of the interstate system several years ago, understandably; now the system is deteriorating again. The remaining programs—mass transit, general institutional construction, urban rehabilitation, bridges, parks, water and sewage systems, ports—have suffered. In current dollars (not adjusted for inflation), the investment-type programs identified in recent budgets have been growing at a 1.5 percent annual rate; the growth in current operations has been at a 14 percent annual rate. A Commerce Department study indicates that through much of the 1970s, Federal spending on "public works" fell short of depreciation, even with the depreciation calculated, with vast understatement, on an original-cost basis. For state and local investment outlays, the rate of net investment has also declined, despite the same understatement of depreciation and despite growth in grants-in-aid. Now that the Federal grants are falling, further decline in such investments is inevitable. Calculated on a replacement-cost basis, these figures would reveal a gross liquidation of the stock of public capital, probably much faster than the equally regrettable liquidation of private capital to which businessmen properly invite attention. Caught between rising transfer payments on the one hand, and efforts to seek both tax reduction and a conventionally balanced budget on the other hand, American public facilities financed by both Federal and local governments are threatened with continuing, progressive disintegration.

The failure to recognize a capital component in Federal spending, and to account meaningfully for the accumulation of public assets (financial, as well as real) over time, also contributes to a naive conception of the Federal debt, and its significance for Federal financial policy. In the household sector, we are accustomed to relating outstanding debt to the level of personal income; in the business sector the level of debt is normally related to other relevant measures, such as current and prospective earnings, and net worth. Only for the public sector do we bemoan an increase it debt measured absolutely as financial obligation. No part of the system—not the business sector, nor the consumer sector, nor the government sector—balances its budget by Federal accounting procedures; all of the sectors experience a continuing rise in outstanding debt.

Such a naive way of reviewing the Federal debt, without benefit of any investment perspective, gives rise to excessive alarm (given the present deficit projections, some alarm is certainly warranted) over the level of the debt, and even simplistic exhortations to "pay it off." In fact, the relationship of Federal debt to the GNP from which the Federal government generates its revenues has been generally declining throughout the postwar years (whereas it has been rising, although from a much lower base, in both Japan and West Germany; their lower bases are attributable to the repudiation of their public debt by the new governments installed by the Allies at the end of World War II). The government's sovereign power to command its income out of the GNP is limited, of course, by the effects of taxation on incentives in the private sector, where the government's revenue is generated; but in addition to this power, it has a balance sheet as well as an operating statement. To ignore the assets in its balance sheet is to distort the significance of its debt.

Capital budgeting would thus add an essential dimension of realism to Federal spending policy and tax policy. While it would vacate the fallacious and unachievable objective of an overall balance in the Federal budget and an end of all growth in Federal debt, it would by no means provide a warrant for abandon in either spending or debt. *Indeed, it would require current financing of current costs, including depreciation—a balance or a surplus in the operating budget.* It would provide the controls for effective restraint on all expenses of the government, including the transfers; it would say, loud and clear, that more current operating outlays (including transfers) means more taxes. *Such an operating statement, if available last spring, would have made it thoroughly evident that we could not afford the gross dismantling of our revenue base that was accomplished by the tax reduction, unless it were to be accompanied by an equally gross curtailment of current outlay.*

One of the reasons that the transfer programs have grown so uncontrollably is that the option existed to offset their growth by reduction in public capital outlay; removing this opportunity through separate accounting for capital outlay would restrain the transfers; and the higher level of private job creation in publicly financed investment would reduce the requirements for transfers. A capital budget would alert the public as a whole to the dangers of aggregate underinvestment, undersaving and overconsumption. It would provide the information basis for practical spending and taxing decisions, and for programmed reinvestment in the system in good times as well as bad. It would free us from the classic cyclical entrapment of public investment (it is not needed as a stimulus in good times, and in bad times the stimulus provided by it will come too late). *Public capital investment is necessary; it is not just a cyclical toy.*

The debt formation that would proceed in the capital account is not, as is often argued, a regrettable absorption of real savings that should be made available to the private sector. This argument ignores the fact that modern governments have substantial investment requirements of their own (including defense investment), of a significance no different from the significance that attaches to uses of capital in the private sector. Government, as well as business, requires a call on national savings; it is the debt financing of the *expenses* of government, not of its *investment*, that is a misuse of savings capital.

A revision of Federal accounting to incorporate capital budgeting would require considerable study, looking toward the construction of satisfactory accounting definitions and concepts. Both the Treasury and Comptroller General's office, as well as other public and private bodies with an interest in Federal accounting, have some work in progress on the improvement of the system, including the development of capital outlay, depreciation and net-worth definitions. The definition of "investment" is critical to the effort: a continuously expanding definition would admittedly pose the threat of unmanageable deficits. But this is not an incremental risk: our experience today makes it perfectly clear that the present system is regrettably efficient in the production of unmanageable deficits.

Apart from the capitalization and depreciation of physical assets, capital budgeting would offer opportunities for rationalizing government activities in financial markets. The bewildering and disorderly array of Federal subsidies, secondary-mortgage market activities, developmental capital programs and loan guarantees, interest-rate subsidies, capital availabilities to small business and to depressed areas, even, perhaps, Federal programs for the improvement of human capital—all growing areas of government interest—might be organized and controlled and restrained together. Some of the so-called "tax expenditures" (the selective foregoing of revenue, commonly to encourage investment: for example, the investment tax credit) might be redefined, and those with a measurable prospect of stimulating future growth in the private economy and the tax base might conceivably be capitalized as investment. What appear to be useful opportunities for capital partnership between the public and private sectors would be encouraged by the provision of an orderly accounting structure.

In this and other respects, capital budgeting would foster cooperation between business and government in the renewal of our private and public capital stock. Handled with vigor and restraint, it would do all of these things without adding a dollar to the total deficit, while at the same time imposing necessary limits on the consumption-directed spending of government. It would provide clearer and more stable fiscal information for the use of the Federal Reserve in setting monetary policy. And it would assist in rebuilding the government's reputation, now badly damaged, as an essential contributor to the nation's future growth. All in all, there would be a large reward for relinquishing the antiquated moralisms by which we now define fiscal responsibility.

Representative **Reuss**. We've kept you three extraordinarily helpful witnesses for an extraordinarily long time. I can assure that the contributions made by each of you—and I find them very complementary—will help us in our deliberations. I also intend to distill out of this series of hearings a number of propositions which in the friendliest possible manner we intend to present very shortly to the Federal Reserve so that when Mr. Volcker and his associates come up in late July for their semiannual review of monetary policy they can comment on the world according to Wilmeth and some suggestions of Mr. Hotson and those of Mr. Sommers.

So on behalf of the committee we want to thank you and welcome your contributions, and we'll continue to think about what you have tabled before us today.

We now stand in recess until the day after tomorrow when we shall continue these hearings.

[Whereupon, at 11:55 a.m., the committee recessed, to reconvene at 9:30 a.m., Thursday, June 10, 1982.]

[The following information was subsequently supplied for the record:]

STATEMENT OF FRANCIS H. SCHOTT, SENIOR VICE PRESIDENT AND CHIEF ECONOMIST, EQUITABLE LIFE ASSURANCE SOCIETY OF THE U.S., NEW YORK, N.Y.

In view of an abbreviated schedule of hearings, I have been asked for a brief written statement. This statement represents my personal views and not those of The Equitable Life Assurance Society or The National Association of Business Economists, which I now serve as Chairman of its Legislative Review Committee.

In summary, I believe that the present serious economic situation is the inevitable aftermath of the Great Inflation of 1965-81, but that the transition toward stable prices and renewed economic growth could be speeded materially by a better balance between fiscal and monetary policy. Interest rates are higher than they should be at this stage of the economic cycle, and high rates are impacting housing, automobiles and the farm economy disproportionately.

The reason for continued high interest rates is twofold. First, the federal government is swamping the credit markets with securities to finance a high and rising deficit. Second, current and prospective deficits are keeping alive a stiff inflation premium in long-term interest rates. Savers and investors continue to be fearful of renewed major inflation because rightly or wrongly big deficits are associated with big inflation

The Federal Reserve alone cannot satisfactorily cope with the distortions caused by high interest rates. Giving ground on the aggregate targets runs the risk of stoking the inflation fires. Sticking to the targets may hold the economy back. Therefore, putting the fiscal house in order is the best available prescription for bringing interest rates down.

* * *

In elaborating on these points briefly, let me begin by acknowledging that the recession is indeed a major one and that it has led to substantial losses of output and employment. Nevertheless, if the economy begins to recover after mid-year, which most forecasters including myself believe will happen, the recession will have been of about average duration and depth for post-World War II recessions.

The pains of disinflation must be judged against the disaster of large-scale and accelerating inflation. At its peak, in early 1980, the inflation was running at 18% and had ratcheted upward irregularly for 15 years. We were destroying savings incentives by subsidizing borrowers at the expense of savers. We were encouraging speculation in real estate, metals and futures markets. We were wrecking the long-term capital market by making it impossible rationally to lend for long periods at fixed rates. We were changing the distribution of income in ways that certainly did not help unorganized wage earners and others at the lower end of the income scale. Perhaps most strikingly, we were setting up a time bomb directed at our traditional savings institutions who were and still are stuck with a depreciating portfolio of low-yield loans made in accord with a national policy favoring home ownership. In short, the situation was untenable.

In getting us from there to here, the Federal Reserve should be given good grades for its performance. After one blunder in mid-1980, when the Fed backed off too rapidly from restraint and was rewarded by rekindled inflation and record-high interest rates, the Fed has remained on the course of gradually bringing down the growth rates of monetary aggregates.

One should of course acknowledge that Federal Reserve policy, to be successful against rampant inflation, has had to be operated with all the sublety of a meat cleaver. In the early stages of disinflation, it does not really matter which of the many possible aggregates is assigned primacy. The growth rates of these aggregates are closely correlated with each other. Success in curbing one will tend to lead to success in curbing others.

Nevertheless, at this stage of the cycle, it has become important to ask in which ways the Federal Reserve might become supportive of economic recovery without fanning inflation. First of all, the monetary aggregate targets should not be considered to be etched in stone. With multiple targets for different aggregates, it is next to impossible to achieve all of them. In 1981, the Fed overshot some targets and undershot others, as shown in the attached Table. A repetition of this experience, in 1982, including M_1 growth somewhat in excess of 5 1/2%, would not disturb me, especially because the institutional factors influencing the relationships among the aggregates are constantly changing. However, that should not be an excuse for encouraging excess growth above target for all the aggregates. This danger exists on the basis of the 1982 record so far, as also shown in the Table.

Second, there is an excellent argument to be made for emphasizing credit aggregates rather than deposit aggregates. The credit aggregates give a better clue than the liability aggregates as to whether the pace of bank loans to business and consumers is compatible with recovery in the private sector, or whether money creation is largely related to the financing of the treasury. However, while such knowledge is valuable, and is in fact gathered by the Fed, there is of course nothing to be gained by seeking to stimulate credit expansion for the private sector over and above treasury financing if government credit demand alone generates all the noninflationary liquidity the economy can stand.

The main virtue of an emphasis on the credit aggregates in the coming months is simply to underline the urgent need to curb treasury demands so as to make room for the private sector. As matters now stand, the Federal Reserve has an almost insuperable dilemma. The U.S. government will take a rising rather than a declining share of reasonably calculated credit supplies as the private economy seeks to expand again. Thus, curbing the monetary aggregates presents the threat of an early end to the next recovery. The danger can be averted if Congress and the Administration make sure federal revenues will rise more rapidly than expenditures in the next few years. Savings and investment will be properly stimulated only if the government spends progressively lesser shares of the GNP, or if it taxes consumption more heavily.

On the positive side, I am convinced that a credible reduction in federal deficits is the one remaining obstacle in the path of lower interest rates. Inflation and private credit demands are back in line with our traditional 3%-4% real GNP growth path; but there is unfinished business in the halls of Congress before we can be sure of that result.

* * *

Table attached

Federal Reserve
Monetary Growth Targets
1981 and 1982

1980 IV - 1981 IV

	Target	Actual	
M1-B	6%-8.5%	5.0%	Under Target
M1-B Adjusted	3.5%-6%	2.3%	Under Target
M2	6%-9%	9.4%	Over Target
M3	6.5%-9.5%	11.4%	Over Target
Bank Credit	6%-9%	8.8%	On Target

1981 IV - 1982 IV

	Target	'81 IV - April '82 Annualized ^{e}	
M1	2.5%-5.5%	8.8%	Over Target
M2	6%-9%	10.0%	Over Target
M3	6.5%-9.5%	9.7%	Over Target
Bank Credit*	6%-9%	7.0%	On Target

e = Equitable estimate

* The 1982 bank credit target runs from the average level of December 1981 and January 1982 to the average level of the fourth quarter of 1982.

Abbreviated Definitions:

M1-B = M1 = Currency + demand deposits + other checkable deposits (not including money market mutual funds).

M1-B Adjusted = M1-B reduced to offset the "extra" growth caused by shifts of savings accounts into NOW accounts.

M2 = M1 + savings deposits + small time deposits + overnight repurchase agreements (RP's) + non-institution money market mutual funds.

M3 = M2 + large time deposits + term RP's + institution money market mutual funds.

Bank Credit = Total loans and investments of commercial banks.

Source: Board of Governors of the Federal Reserve System.

THE FUTURE OF MONETARY POLICY

THURSDAY, JUNE 10, 1982

Congress of the United States,
Joint Economic Committee,
Washington, D.C.

The committee met, pursuant to recess, at 9:30 a.m., in room 2359, Rayburn House Office Building, Hon. Henry S. Reuss (chairman of the committee) presiding.

Present: Representatives Reuss and Richmond.

Also present: James K. Galbraith, executive director; and William R. Buechner and Robert E. Weintraub, professional staff members.

Opening Statement of Representative Reuss, Chairman

Representative Reuss. Good morning. The Joint Economic Committee will be in order to continue its series of hearings on the future of monetary policy.

We are particularly delighted to have with us this morning one of the most distinguished students of the subject, James L. Pierce, professor of economics at the University of California, Berkeley. Mr. Pierce won his spurs some years ago when as staff director of the Fine Study, "Financial Institutions and the Nation's Economy." While it didn't immediately accomplish the goals it set for the Nation it furnished the basis for the Monetary Decontrol and Regulatory Reform Act of 1980 and enlightened the discussion which has gone on ever since. We're very grateful for the national contribution which James Pierce made then.

We're happy that you're here with us. You have a prepared statement which under the rule will be received in full in the record. Will you now proceed, Mr. Pierce.

STATEMENT OF JAMES L. PIERCE, PROFESSOR OF ECONOMICS, UNIVERSITY OF CALIFORNIA, BERKELEY

Mr. Pierce. Thank you very much, Mr. Chairman, for your kind comments. I'm of course delighted so much of the Fine Study has ended up one way or another in becoming law, and perhaps more of it will at some point.

If it's all right with the committee, my prepared statement is sufficiently short; perhaps it's most efficient for me to read it rather than trying to summarize what is already a summary.

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MONETARY POLICY CAN CURE INFLATION THROUGH RECESSION

I am here today to add my voice to those who are critical of current monetary policy. I believe that this policy is unsustainable and that it is not the appropriate means for promoting economic growth and price stability. Current budgetary policies have made the situation even more untenable.

There has never been any doubt that monetary policy could dramatically reduce inflation. With sufficiently restrictive growth in the supply of money and credit, the housing market could be destroyed, consumers could be prevented from purchasing automobiles and other durable goods, business profits could be wiped out, and business fixed investment could be depressed. This would throw millions of people out of work. The total effect of a sufficiently restrictive monetary policy would be a deep recession which would eliminate the enthusiasm of labor and management for raising wages and prices.

This story, which became reality, demonstrates that inflation can be reduced relatively quickly. The natural question, however, is at what cost and for how long? Social pressures mount to get the economic out of its depressed state. These pressures can ultimately produce highly stimulative policies such as those that followed the 1974-75 recession. The stimulative policies rekindle inflation, and the economy ends up back where it started with high inflation. I fear that the Federal Reserve has started the economy on just such a painful trip.

MONEY TARGETS WILL NOT SUSTAIN RECOVERY

A case could be made for a harsh monetary policy if it could be maintained long enough to wring inflation out of the economy and if the economy could grow at a sustained noninflationary pace thereafter. This appears to be the hope of the Federal Reserve and of the Reagan administration. I believe that it is highly unlikely that the strategy will be successful. When the economy starts to recover, there must be some monetary accommodation or the recovery will be very weak. The monetary growth targets of the Federal Reserve are simply not high enough to promote a sustained, healthy economic expansion. Unemployment will remain high, and housing and other interest-sensitive sectors will remain depressed as the economy struggles against the effects of a highly restrictive monetary policy. This, in turn, will retard the growth of tax revenues and make budget deficits even larger.

It is unlikely that this situaiton will be tolerated indefinitely. The longer that monetary policy remains so restrictive—and the harder that it must battle against the effects of tax cuts, high military spending, and rising deficits—the more unbalanced the economy becomes. Eventually monetary policy will have to be more expansionary. The longer that the inevitable is postponed, the larger is likely to be the ultimate expansion of money and credit growth. This could easily lead to a resurgence of rapid inflation. This prospect is one interpretation of why long-term interest rates have remained so high. There is obviously massive uncertainty on Wall Street about future montary policy, and there is a real fear of a resurgence of high inflation.

MONEY TARGETS SHOULD BE RAISED AND FISCAL POLICY TIGHTENED

The Federal Reserve made a serious policy error when in late 1979 it embarked on its increasingly restrictive and nonsustainable policies. Its current monetary growth targets are simply a continuation of this policy. I believe that there must be an increase in money growth to a more sustainable level. Growth of M_1 of 2.5 to 5.5 percent is too low to produce a meaningful economic recovery. I also believe that there must be a better mix between monetary and fiscal policies. The stimulative effects of tax cuts and increases in defense spending will push real interest rates higher, and the massive deficits will further these increases. The current mix of monetary and fiscal policies makes no macroeconomic sense, and this fact has not been lost on financial markets.

Both the Federal Reserve and the Reagan administration seem adamant about sticking to their guns. Steadfastness can be a virtue; stubbornness can be a vice. I fail to see the public benefit from the Government sticking to its guns if it ends up shooting off our feet.

MORE MONEY GROWTH NOW NEED NOT CAUSE INFLATION

Whenever there is a proposal to increase the rate of money growth, the monetarist chorus chimes that this will increase interest rates, not decrease them. This prediction has become the new conventional wisdom espoused by the administration, the Federal Reserve, and by some Wall Street pundits. It is important to see the element of truth in this assertion in order to see its fallacies. It is true that a high rate of money growth that is sustained over a substantial period of time produces a high rate of inflation. When inflation is high, nominal interest rates are also high because lenders must be compensated for the declining purchasing power of their money. Thus, ultimately and in the long run, high rates of money growth are associated with high interest rates. This observation tells us nothing, however, about the consequences of a rise in money growth from its current low level to one that is more consistent with sustained economic recovery.

It is also true that under the Fed's new operating procedures week-by-week fluctuations in the quantity of money produce movements in interest rates in the same direction. For example, a nonpolicy-induced bulge in M_1 produces a temporary increase in interest rates. This occurs because the Fed does not provide sufficient nonborrowed reserves to support the bulge in money. Interest rates rise as banks are driven into the discount window.

Under the current operating procedures, market participants spend a fortune on forecasting weekly movements in M_1, and they react sharply to any large unexpected movements. It is important to note that there is nothing irrational about this behavior. Substantial profits are earned by those who correctly anticipate short-term movements in money. It should also be noted that the market's response has nothing to do with inflationary expectations. Participants realize that the bulge in money will produce a temporary rise in interest rates under the Fed's operating procedures and they act on this knowledge.

WHY ARE SHORT-TERM INTEREST RATES SO HIGH?

Now let me turn to the question of why short-term interest rates are so high. Here the answer is straightforward, and it has little or nothing to do with inflationary expectations. Since the Federal Reserve established its anti-inflation policy in late 1979, the growth in M_1 has, on average, been less than the rise in prices. Money has not grown rapidly enough to support even a constant level of economic activity. The decline in real money balances has produced high interest rates. While economic activity has declined, so have real money balances, and interest rates have remained high. Put another way, the supplies of reserves and of short-term credit have not grown enough to support the high level of credit demand in the economy. This demand is not the result of an economic boom and high inflation, but rather, it is a consequence of falling business profits and a liquidity squeeze. The result is high interest rates.

Finally, the bulge in M_1 growth that occurred earlier this year appears to be the result of an increase in the liquidity desires of the public stemming from the recession and from fear about the financial system. Conventional economic theory predicts that such an increase in money demand will raise interest rates unless there is complete accommodation by the Fed. Since the accommodation was not complete, the demand shift served to increase upward pressure on interest rates.

The simple fact of the matter is that the financial system is starved for money, and as a result, interest rates are high. This means that a policy-induced increase in money growth will push down short-term interest rates. Faster reserve and money growth will increase the supply of credit, and short-term interest rates will fall.

WHY ARE LONG-TERM RATES SO HIGH?

The issue of long-term interest rates is more difficult to deal with. There obviously is a great deal of uncertainty concerning the long-run inflation rate and the long-run performance of the economy. Many borrowers and lenders are unwilling to take long-term positions.

It is important to note, however, that to the extent high long-term interest rates are the result of expectations of high inflation in the future, the market is implicitly assuming that future monetary policy will be highly expansionary. If this is the case, a moderate easing of monetary policy at this time is hardly consistent with a further rise in long-term interest rates. It is double counting to assert that long-term interest rates are high because the market expects massive easing in policy and then to claim that any easing of policy will raise interest rates further.

I believe that long-term interest rates will come down only as the Government achieves balanced and sustainable macroeconomic policies. Uncertainty can be reduced by sensible policies, but there is little in current policy that builds public trust. Thank you.

Representative REUSS. Thank you very much, Mr. Pierce.

SHOULD THE FED EXCEED ITS 5.5-PERCENT MONEY GROWTH CEILING?

In your statement you say that you believe there must be an increase in money growth, that growth of M_1 in the 2.5- to 5.5-percent present target range of the administration and the Federal Reserve is too low to produce recovery. What do you say to the answer of the Federal Reserve and the administration—that in fact the Fed has been considerably exceeding the 2.5- to 5.5-percent target path, that so far this year it's been creating new M_1 at the rate of almost 9 percent. So, in effect, it can come back at you and say, "What are you kicking about?" How do you answer that?

Mr. PIERCE. Well, I guess what I'm kicking about is that most of that relatively rapid M_1 growth was the result of the bulge that occurred at the beginning of the year, which by the Fed's own statements has been a result of an increase in the demand for money. And if the Fed had not provided those funds as they shifted into NOW accounts from savings accounts and time accounts, then interest rates would have gone monumentally high.

In order to keep interest rates just where they are when there's a demand shift of that nature, it's necessary for money to grow. So I don't find that an indication of easing whatsoever.

My indication of easing is real short-term interest rates which have come down. Nominal interest rates are now only 16 percent, so real interest rates are all the way down to 10 percent. I find that hardly indicative of an easy monetary policy.

Representative REUSS. Many of our witnesses have said that the mere existence of a 2.5- to 5.5-percent target—set in response to the congressional demand that that Federal Reserve set up targets—accompanied by the gross failure to get within that target, it is said that that kind of disregard of the targets itself produces uncertainties in the market and leads to higher interest rates.

Do you have a view on that?

Mr. PIERCE. Yes; I don't use the word "disregard." I think the Federal Reserve thinks a lot about those targets and about the press response when it misses them, which it often does. I think that's an inevitable consequence of Congress demanding, and the Federal Reserve going along with, the establishment of targets which cannot be achieved week by week or month by month even if it tried as hard as it could, which it often doesn't.

THE FED'S TARGETS SHOULD BE REALISTIC AND ACHIEVED

Representative REUSS. Could I stop you there? The Congress hasn't really demanded that.

The Congress has said in the Humphrey-Hawkins Act and in earlier resolutions and laws that the Federal Reserve should select a target range of monetary aggregates which it believes will achieve the goals of maximum employment, production, and purchasing power, and stay within them on an annual basis unless it finds some good reason to change them.

What I'm suggesting is that the congressional directive is not at fault. The fault is that the Federal Reserve has picked unrealistically low target paths, and if it stays within them it causes high interest rates through overtight money; if it disregards them, it causes high interest rates by indicating that it is out of control.

Mr. PIERCE. Well, I guess I don't want to get into a debate about Congress role in this except to point out, in fairness, that yes, that's what the Humphrey-Hawkins Act says; but I read enough congressional testimony to know that the Federal Reserve is criticized on a much more frequent basis than annually when it falls outside of those target ranges.

Representative REUSS. But not by the arms of Congress which are the official criticizing or applauding arms; namely, the banking committees. The House Banking Committee, for instance, has not in its reports jumped on the Fed for being momentarily over or under. It has looked at things on an annual basis.

I don't want to get into an argument about who shares the guilt for the mess we're in either, but don't you think that continued failure over a long period of time to fit within the self-imposed monetary aggregate ranges does produce a bad result? For example, last year, in 1981, with a target range of M_1 of 3 to 6.5 percent, the Fed actually came in for the whole year with something like only 2 percent growth.

Mr. PIERCE. Right.

Representative REUSS. That was a great mistake and we said so. Do you disagree?

Mr. PIERCE. No; I interpret the growth ranges a little differently than some people do. In 1979 the Fed said, "We're going to be tight. We're going to be as tight as we can get away with, and one way we're going to accomplish that is freeing up interest rates so we're no longer responsible. The market will determine that." The Fed has made good on that promise. Part of the consequences of that you saw, with money growth for the year lower than it had announced. My humble guess is that it did not cause any consternation on Constitution Avenue. It was consistent with wringing out the inflation as rapidly as possible.

I think you've pointed to the therapeutic function of the monetary growth targets; namely, that when they fall below them, then Congress and others can criticize them for being more restrictive than they said they were going to be, and that is a plus. I'm certainly critical of the degree of monetary tightness that they have been engaged in.

I guess I was more responding to the hail of criticism that occurred as a result of the bulge that occurred at the beginning of this year, that somehow the Fed had thrown up its hands and now inflation was right around the corner. But if one looks over a longer term basis than 1979, money growth has slowed dramatically.

Representative REUSS. I was responding that I don't think that that hail of criticism really came from Congress. It came from failed monetarists who needed a scapegoat. Isn't that right?

Mr. PIERCE. Basically, yes.

Representative REUSS. So, while Congress has a few failed monetarists, they're not a majority.

Mr. PIERCE. Fair enough.

WHY A BULGE IN MONEY GROWTH RAISES SHORT-TERM RATES

Representative REUSS. Let met turn to another matter, where you point out that a short-term bulge in M_1 somewhat paradoxically at first blush tends to produce higher interest rates.

Mr. PIERCE. Right.

Representative REUSS. A simplisticist would say, "Well, more money, interest rates should go down," but they don't, because as you point out, sophisticated market participants realize that the bulge will not be accompanied by the creation of enough nonborrowed reserves, and hence interest rates will temporarily go up.

Knowing that, am I right in inferring that you don't see anything wrong with that; we can live with that market-imposed irony?

Mr. PIERCE. Oh, sure. It's only an irony because in the textbooks we all read that particular factor was left out. If it had been included it would have never been an irony to begin with. Yes, sure, we can live with that. It's short term and it's a consequence of the operating procedures. We never used to see it because the Fed stabilized the Federal funds rate and provided those reserves in the short term to go with the bulge.

IF BUDGET PASSES, THE FED SHOULD ALTER MONETARY POLICY

Representative REUSS. Now you're familiar, Mr. Pierce, with the language in the budget resolution as it passed the Senate. The same language is contained in all versions of the budget resolution that are before the House today. The monetary language in effect directs the Federal Reserve, in view of the beginnings of control over the deficit which the budget resolution is supposed to bring about, to reevaluate its monetary targets and implicitly, having reevaluated them, do something about freeing itself from the self-imposed corset.

If you were a member of the Federal Reserve Open Market Committee, a consummation devoutly to be wished as far as I'm concerned, what would you do if that resolution were dumped on your desk and the Open Market Committee were assembled over here on July 1? I think that's their next meeting.

Mr. PIERCE. First of all, I guess because I am a college professor I can deal in abstractions, and I'll assume I am a member of the FOMC.

Representative REUSS. Probably say thanks for nothing.

Mr. PIERCE. Right. Well, first of all, I'd be delighted if and when that Budget Resolution is passed. I would argue very strenuously in favor of the Federal Reserve going along with a change in the mix of policies. I've been very disappointed by at least the public statements of Mr. Volcker who seems to be saying that he has no intention of changing his monetary policy just because the budget picture is different. I find that strange.

If the original monetary policy were correct, then it can no longer be correct if the budget is changed.

Representative REUSS. Well, I thought Mr. Volcker was saying that the Fed would obey the mandate of Congress. But the Wall Street Journal editorial writers who have access to Mr. Volcker's mind not given to many others tell us that, no, that isn't so, that his views, is as intransigent as you said it is. We don't know.

But anyway, what would you do as one member of the 12-person Open Market Committee, irrespective of what Chairman Volcker does?

Mr. PIERCE. Well, I just point it out to say that there's really only one truly important member of the FOMC. I would argue very strenuously in favor of some easing of monetary policy in terms of reserve growth to go along with the change in the budget, and I would argue to do otherwise would simply doom us to increasing deficits, that it's a self-defeating exercise. I would repeat that the thrust of my testimony in that meeting was that if the Fed tries to be too tough, eventually the pressures will mount; because, unemployment will be so high and the economy will be so badly out of balance that we'll have to have extremely stimulative policies. We have historical examples of that.

FED PURSUING "DANGEROUS * * * RADICAL" POLICY

It's not as though the issue is toughing it out until the economy gets down to zero inflation and all is well. I don't think that's going to happen. It's extremely dangerous and I think radical policy that they're pursuing. I find it particularly paradoxical that I'm in the role these days of being a conservative, that I would prefer to see a more orderly and conservative monetary policy that's consistent with the long-run interests of this country and not try to wring the last ounce of inflation out today because it will come back to haunt us. Chairmen of the Federal Reserve do get replaced. Political pressures build up and there could be a tremendous push for an expansionary policy unless the Fed eases up some now.

The policies today, in my oinion, are just not sensible. It's very difficult teaching; when one gets students they say, "Explain this," and I end up saying, "Well, I really can't." It has nothing to do with politics. One just cannot give much of an economic rationale for the current monetary and fiscal policies in this country.

SHOULD THE 5.5 PERCENT CEILING BE RAISED?

Representative REUSS. Well, reverting to this hypothetical July 1, 1982, meeting of the Open Market Committee of which for the purpose of the discussion we made you a member, suppose you're sitting there and suppose Governor Teeters, who in my view has been very right-minded about this whole business, starts a discussion by saying: "Well, gentlemen, we've heard it from Congress, and obviously our M_1 monetary targets of 2.5 to 5.5 percent are unrealistically low. They're bad because if we stayed within them we would kill the recovery, and they're bad because if we grossly exceed them we not only flout the monetary process but spook the markets. So we've obviously got to do something about them. We've got to raise them. What do you think, Governor Pierce?"

Mr. PIERCE. I would say I would agree with that, and I would call for a truly path-breaking development of a public announcement to that effect so that the markets would know what is going on. The Fed should simply announce that because of the change in the budgetary situation, and not because Congress has forced it to do this—that would be the absolutely wrong impression and I'm really very bothered that the U.S. Government has to get to the point where Congress has to order the Fed to do things, and then the Chairman can decide whether in fact Congress has the authority to order its own creature to do things—the Fed would simply announce that, yes, because of the change in the budget situation a new monetary policy is appropriate. It's a policy that would encourage capital formation in this country through encouraging somewhat lower interest rates, both short-term and long-term, matched by a fiscal policy that's less punitive from the point of view of consumption. That policy is completely consistent with the Fed's objective for bringing down inflation. I, as a Federal Reserve member, am delighted to be able to have this opportunity to adopt a monetary policy that's more convivial to capital expansion in the United States. That's what I would say.

SMALL INCREASE IN MONEY GROWTH WOULD "WORK WONDERS"

Representative REUSS. What would you say when the press or somebody said, "Fine, we hear you, and what changes in the targets do you advocate?" The present target is 2.5- to 5.5-percent M_1 growth but the Fed has actually created about 9 percent, from a base that is quite starved because it represented the base as of the final quarter of last year when, with only a 2-percent addition to M_1 it hadn't shown the normal rate of growth. What would you say to someone who recalled your statutory obligations to name parameters, target ranges?

Mr. PIERCE. I guess at that time, when asked, I would have more numbers at my fingertips so I could discuss growth rates better than I can right at this minute.

I'm bothered by what would appear to be a shift in policy that would go to a 9-percent growth. What would stick in people's mind is the 9 percent, not that the base was low or anything like that, and that would appear to represent a caving in of policy rather than a relatively small change to be consistent with the new budget.

I would hope to be able to find a base where you don't have to do 9 percent, which is a normal way that these things are done. You find a high month and go from it; the Fed is very good at that, picking the right month.

Representative REUSS. Well, you wouldn't, as a matter of fact, need to be intellectually adventurous about that. Couldn't you just say, "We'll pick the present base"?

Mr. PIERCE. I knew this question was going to come up. I do not work intensively enough these days with models and other things to be able to give you an explicit answer to what I think the exact growth of money is. My guess is that a relatively small increase in the rate of growth would work wonders, that the financial markets are so starved that a relatively minor increase in the rate of growth—say from 2 percent to 5 or from 5 to 6 or 7— would accomplish a very great deal. Some of the extrapolations that have been made on the amount of monetary expansion that is required in order to get the country going again have been based on relationships where we're in more normal ranges of behavior than we are right now. People are starved as they are. Believe it or not, if a firm could only pay 12 percent for short-term term money rather than 16 or 18 percent, that would work wonders and perhaps it wouldn't go bankrupt. But I really can't say how much that should be.

THREE SUGGESTIONS FOR FEDERAL RESERVE ACTION

Representative **Reuss.** I think what you're saying is very important and not inconsistent with the mantle of conservative which you have adopted; namely, that about all the Fed need do is to say: (1) the its present 2.5 to 5.5 M, targets are untenable; (2) that the upper end should be modestly raised accompanied by the selection of a more realistic and perhaps current base; and (3) that the then projected targeted mid-range of monetary growth would not be very swollen and would not alarm the markets and in fact might numerically be under the 9 percent which the fed has been producing for the last eight or nine months. Isn't that so, that the results could be quite calming rather than alarming?

Mr. **Pierce.** Yes, I think if handled appropriately. I certainly would not expect the Fed to admit that its previous policy was untenable, but I don't think it needs to do that. All it needs to say is, "Look, the world has changed. It looks as though we will not be faced with deficits of the size that had previously been anticipated and that we won't have so much stimulation from consumers, therefore, for very good economic reasons, the growth ranges should be changed, should be modified, and we expect money growth to be in the upper parts of those ranges not because we've caved in on inflation, but because the world has changed."

It gives the same result and I think would be consistent with a more orderly and sustainable economic expansion. It certainly would not imply a resurgence of inflation, although we will see some because commodity prices can't fall forever and the dollar can't rise forever.

FALLACY THAT HIGH INTEREST RATES RESULT FROM INFLATION EXPECTATIONS

Representative **Reuss.** The administration's support of the Federal Reserve's monetary policy is vigorously reaffirmed in the statements of various administration leaders including in just a few minutes, in the statement of Under Secretary of the Treasury Sprinkel who will be before us at 10:15. Secretary Sprinkel's view is really epitomized in a sentence from his statement which I'd like to read to you:

> Interest rates will fall only when financial market participants become convinced that inflation will not resurge and therefore adjust their inflationary expectation downward.

I think that's an accurate statement of the administration's view. I would ask you if there isn't a great fallacy inherent in that, the fallacy being as follows: Even though inflation is brought down to zero, as long as interest rates remain high—if you adopt the view contained in that sentence—there isn't much that can be done about it because somewhere in the obscure recesses of the mind, financial market participants must be think that inflation will rise again and so they are keeping interest rates high and therefore whatever tight money policy is currently in vogue must be right.

Now I believe that to be a fallacy because the thing that made the interest rates high would be the tight money policies in vogue rather than some indecipherable subjective feeling on the part of market participants.

But if you adopt the view that you have to grin and bear the high interest rates induced by one's own tight money policy, because this must mean that financial market participants think that the old devil inflation will rise again, you really are licked, aren't you?

Mr. PIERCE. Yes. I think that's part of this monetarists' chant that I referred to in my statement. I think it was a great disappointment to monetarists when this prediction that they have been making for years; namely, the interest rates would fall dramatically and rapidly when the Fed pursued slow money growth. When that didn't occur it was disappointing. There was a tendency to lash out at Wall Street as a culprit, that somehow for the first time in record history self-interest was from the monetarists' point of view not the right thing, and somehow these people were acting irrationally and messing up the country. It's fallacious on a number of grounds.

The easiest way to see it is in a short-term loan, a 90-day loan, where the relative inflation is the inflation over the next 90 days. That's the decline in the purchasing power of money that's going to be relevant for that loan. What happens to inflation 5 years from now is totally irrelevant for that 90-day loan. It has nothing to do with it by any stretch of the imagination.

To say that market participants continue to believe that the annual rate of inflation over the next 90 days is going to be 10 and 12 percent when it's been running at very low levels makes no sense. Market participants aren't that bad forecasters. They're going to wake up. And over a 90-day period the actual rate of inflation is going to come very close to the anticipated rate of inflation. It's easy to forecast inflation 90 days ahead. It just simply makes no sense, for high short-term interest rates you cannot appeal to inflationary expectations as a rationale.

Yet there's high long-term rates. Why? Because, as I say in my statement, there are no reserves in the system, and credit demands are very high. There is supply and demand at work, believe it or not, and when the demand exceeds the supply, the price goes up. The price doesn't go high enough to equal the rate of demand to supply, and that's what happened.

EXPECTATIONS DO NOT AFFECT SHORT-TERM RATES

It has nothing to do with inflationary expectations, and what I would suggest you ask of the administration officials is why short-term rates are so high. I'll grant you that for long-term rates Wall Street thinks there's going to be inflation 10 years from now. But what makes them think we're going to have rampant inflation 90 days from now? That's what would be required to explain why the 90-day T-bill has such a high interest rate, or why the Federal funds rate is so high. That's just 1 day, overnight. How much change in inflation rate are you going to get between today and tomorrow morning? I don't think very much. Yet that interest rate is very high. It can't be inflationary expectation.

It just doesn't hang together, and Wall Street just isn't being pernicious. It's trying to do what it always does, namely allocate credit by price, and it's doing that. I think it's very unfortunate that so much time is being spent on the supposed mystery of why interest rates are so high and the only way to get them down is to destroy the economy. I happen to agree with that. If we had a big enough depression in the United States we could get down short-term interest rates that way. Unemploy another 10 million people. That ought to do it. but no one seriously wants that, and it isn't necessary.

WHY THE LONG-TERM MARKET HAS COLLAPSED

What's necessary is to have, first of all, I think more expansionary policy in the short run. For the longer term interest rates we need a set of policies, both fiscal and monetary, that are sensible so that market participants won't say, "My God, things have run amok. I don't trust anything." The best guess is that the country will be worse off 10 years from now than it is today. How do I know that? Because we have an extremely conservative President who's now rationalizing a $200 billion deficit. Now when the world is that hard to understand and that upside down, I don't want to get involved in the long-term market. I can do just fine in the short-term market. So you've got pension funds now who are placing their funds in short-term securities, and I don't blame them. I'd probably do the same thing.

It has nothing to do with inflationary expectations in the standard sense of the word. I think it has to do with trying to live in a world where American macroeconomic policies are, I think, by most people's view very ill-designed with an apparent lack of appreciation in some quarters as to what the implications are of these policies. I don't blame Wall Street for this.

45 PERCENT OF CREDIT IS SHORT-TERM DEBT

Another comment I'd make: you might hear, "Well, short-term rates, who cares about them?" 45 percent of the credit in the United States raised by business is by short-term debt now. Nobody is borrowing long-term, either. So those short-term interest rates, those 90-day rates, are extremely important for the profitability of business. It's not just an irrelevant statistic, but one that has a very substantial effect on the profitability of firms and on their investment behavior. They're financing investment short-term now, not long-term, and the way to get those short-term interest rates down is not by turning the monetary screw one more turn. That will get them up. The way to get them down is to loosen the monetary screw.

Representative REUSS. You will have to say for Wall street, though, that like a puppy which has been cruelly whipped by its master, it nevertheless continues to lick the master's hand. They deserve some points for that.

We have here on our committee staff one of the Nation's most distinguished monetarist economists, Bob Weintraub, who I imagine has been sitting there writing over the churlish remarks you and I have been making about monetarists.

Bob, I'd welcome you directing as many questions as you would like at our friend, Jim.

Mr. WEINTRAUB. Yes, I do have several questions, Jim.

Mr. PIERCE. I thought so.

INTEREST RATES COULD INCREASE EVEN MORE

Mr. WEINTRAUB. First off, you say the stimulative effects of the tax cuts and increases in defense spending will push real interest rates higher. I want to say that again—will push real interest rates higher.

I wonder why you used the word "will" and not "already have."

Mr. PIERCE. Because I think they'll push them higher yet.

Mr. WEINTRAUB. Why will markets think this is still to come when they may already have discounted these effects? Why don't they think like you do, and why haven't they already discounted them?

Mr. PIERCE. I think in the long run they have. As I pointed out a minute ago, there's nothing to discount on a 90-day paper except the next 90 days.

Mr. WEINTRAUB. Let's deal with the long rates. You say markets already have discounted these effects. Why would they push these long rates still higher if they have already discounted these effects? They have the same information that you have.

Mr. PIERCE. Well, if you read the prepared statement, I very carefully didn't say what real interest rates I was talking about. The one that's easiest to describe is real short-term rates. I think they're the ones that are most relevant because that's where money is being borrowed these days.

I really don't know whether these policies would push up real long-term interest rates. I can't predict that. Nobody understands long-term interest rates well enough to make a prediction at all. I was really referring to the short term, and I think we only have to wait for reality and they'll rise.

Mr. WEINTRAUB. I'm glad you left the long-term rates the same now, that that factor has already been discounted.

Mr. PIERCE. I didn't say that. I said I don't know.

Mr. WEINTRAUB. I think it already has been discounted. I think the markets are efficient, and the so-called market psychology does reflect a very real underlying economic change which Under Secretary Sprinkel refers to in his prepared statement. We are attempting to use fiscal policies to alter the consumption-investment mix of the economy and to increase defense spending. Well, if that's going to happen, long-term real interest rates have had to rise to induce postponement by consumers and householders of purchases of such goods like housing and automobiles.

Mr. PIERCE. And also produce durable goods.

Mr. WEINTRAUB. There's no question whatsoever about that. However, in my opinion, as time passes, plant and equipment investment will increase as a result of the tax cuts.

Let me turn to short-term rates now. You correctly, I think, stated that much of today's high short-term rates is due to a shortage of reserves. Now, of course, a shortage of reserves can be made up in one of two ways, either by decreasing credit demands or by increasing the supply of credit. Would you agree with that?

Mr. PIERCE. Yes.

WILL THE DEMAND FOR CREDIT DECREASE DURING THE RECOVERY?

Mr. WEINTRAUB. Why do you stress the need for increasing the supply of reserves and somehow through that—and I'm not sure of the mechanism—an increase in the supply of credit? Why don't you stress the possibility of decreasing the demand for credit?

Mr. PIERCE. We tried that, and it goes in the wrong direction. The idea is if you create a large enough recession, credit demands will fall because incomes fall, and that will lead to a decline in interest rates.

We've had two very notable examples of this now, first in the United Kingdom and then in the United States. If monetary policy is sufficiently restrictive, you get simply what I'll call necessitist or no-alternative borrowing on the part of firms. Firms nowadays have a choice. You either pay 20 percent to finance inventories or you go out of business. And assuming they want to stay in business, and most of them do, they will pay the rates. And those demands are high. My guess is that a good part of the growth in credit demand now is just financing interest.

Mr. WEINTRAUB. Well, let me come back to exactly that point, because in your prepared statement you do refer to a high level of credit demand. You say that it is not due to an economic boom and high inflation but, rather, it is a consequence of falling business profits and liquidity squeeze.

Now I understand that. I think that's absolutedly correct. I think it probably accounts for 3 or 4 percentage points in short-term interest rates.

My question is this. When the recovery comes—and I believe with all my heart that it's going to come perhaps it already has started, but I think there is a 90-percent probability that it will occur by year end—in that case, cash flows will improve and credit demand will fall. Isn't that the case?

Mr. PIERCE. No, that isn't the case at all because the economy would be expanding. People who have looked at this very carefully from the point of view of flow of funds and sophisticated models try very hard to take into account this change of mix in credit demand.

I've yet to see any forecast from people who use such techniques of trying to actually look at the facts who can come to any conclusion other than that there will be an insufficiency of supply of credit relative to the demand. That's why virtually all the forecasts——

Mr. WEINTRAUB. When you use that word "relative," it seems to me you're hedging, Jim, with all due respect.

Mr. PIERCE. No, I'm being a good academic.

Mr. WEINTRAUB. Once again, we can change the relative supply of credit by reducing the demand.

Let's get to this point of the recovery and credit demands.

Mr. PIERCE. You don't want me to finish?

Mr. WEINTRAUB. I do want you to finish. Go ahead.

RECOVERY AND EXPANISION WILL BE "ANEMIC"

Mr. PIERCE. Well, I say all of those forecasts that I've seen are coming up with a very weak recovery. I think we all agree that the economy will probably be expanding by year's end. It can't decline forever. But the recovery and expansion will be extremely anemic, and the primary culprit in that anemic expansion is the combination of low supply of credit growth relative to demand and the effect of the large deficit. Those two facts interact, and I don't know of any careful analysis that's been done that's come to any conclusion other than that.

Mr. WEINTRAUB. Well, I want to press you on this, if I might for a few more minutes, on this question of the relationship between recovery and interest rates. Can you tell me what the 90-day bill rate was in, let's say, April or August of 1975?

Mr. PIERCE. No; I don't know. I don't have the vaguest idea.

Mr. WEINTRAUB. I can tell you.

Mr. PIERCE. I thought you could.

Mr. WEINTRAUB. It was 6.5 percent in August. It was about 5.6 in April. April was the rough month. It rose about 3 months after that.

SHORT-TERM RATES FALL DURING EARLY RECOVERY STAGES

Can you tell me what it was in December 1976 which is about 18 months after that recovery began? The answer is 4.4 percent. In other words, short-term interest rates fell in that recovery, and I submit that if you study recoveries you will find that short-term rates do fall in recoveries. They fell in the 1970-72 recovery. They fell in the 1975-77 recovery. They fell in the early 1960's. And the reason they fall is because credit demands fall, and the reason that credit demands fall in my view is because cash flows improve.

I think one would have to agree that an increase in business cash flows is going to have the effect of reducing credit demands. Would you not agree with that?

Mr. PIERCE. It will reduce some and it will increase others. One reason I talked about careful modeling is to avoid this sort of casual correlation that is a temptation to all of us, of looking back at what happened to two numbers, GNP and the interest rates. This behavior depends crucially on the status of the economy and what the sources of the credit demands are, what's being starved and what isn't. I guess just as a simple counter, in those recessions we did not have the greatest unemployment since the 1930's and 16-percent prime rate to start with. We didn't come out with a completely starved monetary system where firms had pared their borrowing to an absolute minimum. To go back and look at situations where interest rates have fallen dramatically during recoveries and say, well, they didn't rise all that much during recoveries for a while, that's true, but that's not today.

Mr. Weintraub. Well, you can always say today's conditions are different than past conditions, but I think we like to look at the past in order to get some guidance as to what's going to happen in the future. I don't think we want to throw the past out entirely.

Mr. Pierce. Well, no. The models I'm describing look at the past very carefully, but they look at it carefully as opposed to casually, and that's——

Mr. Weintraub. I'm sorry you don't think I've taken a careful look, so we'll go on to a different subject.

EFFECT OF 1968 SURTAX AND LOOSER MONEY ON INTEREST RATES

Let me ask you to take a careful look at June 1968. The Congress passed legislation to increase personal and corporate taxes, surtaxes. They were 10 percent. The corporate surtax was effective January 1, 1968, and the surtax on individuals was effective April 1, 1968. At the same time, the Federal Reserve, as I'm sure you're aware, increased money growth in response to this legislation.

Mr. Pierce. Right.

Mr. Weintraub. So we had this change in the mix of the economy. Now conditions then weren't quite what they are today, but I would like you to tell me what happened to interest rates after June of 1968. Did they go up or down?

Mr. Pierce. That's an interesting episode. I think it is both a signal to be careful with the current situation but also represents something that was present then and isn't now. Economists in general greatly overestimated the effect of the surtax in 1968. Whether they would do that again, I don't know. That was before any of the models were operating. The calculations were made on backs of envelopes. I know the Fed model wasn't running, since if it had been I would have been running it. And the contractive effect of those tax increases were simply overestimated.

And so the Fed, I think, mistakenly expanded money and credit growth more rapidly than it should have. That was an honest error. But the positive side of that is, unlike the current situation, and accommodation was made. It was possible for reasonable people to get together; namely, the Federal Reserve and the administration, and try to work out a change in the mix of policy. And, yes, it wasn't done as well as it should have been, but it was worked out.

NEED FOR A BETTER MIX OF POLICY

I'm distressed that in today's environment that seems to be impossible. These battles are being waged in public, very strident positions are being taken about whether Congress can order the Fed to do something and whether the Fed has to respond to a congressional mandate. I think it's a very dangerous think, and I wish that people would simply get more reasonable and try to work out a better mix of policy.

Mr. Weintraub. I think we could share that thought, and I know that Under Secretary Sprinkel is here and the chairman is anxious to question him. I think we both agree and we hope that people can become more reasonable, and I would just say for the record it is true that interest rates rose. They did not fall after that change in the policy mix of 1968. Inflation accelerated also, and by the end of 1969 we were in a recession.

Mr. **Pierce**. Thank you.

Mr. **Weintraub**. But I do hope we can become reasonable. Thank you very much, Chairman Reuss. I really appreciate it.

Representative **Reuss**. I thank you, Bob. Mr. Pierce, we're very grateful to you. I know you have an appointment, and Under Secretary Sprinkel is here, so we'll excuse you now. Come back and help us again as frequently as you can.

Mr. **Pierce**. Thank you, Mr. Chairman.

Representative **Reuss**. Secretary Sprinkel, we are delighted you can be with us back from your travels. You have a prepared statement which under the rule will be received in full. Would you now proceed to give us your statement, and then I'll have some questions.

STATEMENT OF HON. BERYL W. SPRINKEL, UNDER SECRETARY OF THE TREASURY FOR MONETARY AFFAIRS

Mr. **Sprinkel**. Congressman Reuss, it's a real pleasure to be before your committee again. I've had that pleasure on many other occasions, and I'm pleased to be invited to return.

ADMINISTRATION SUPPORTS FED POLICY OF MONEY GROWTH DECELERATION

The Federal Reserve's announced policy to reduce the rate of money growth is absolutely necessary in order to assure that the progress made to date on inflation will continue into the future. The administration supports completely the Federal Reserve's policy which calls for a deceleration of money growth. Their announced policy and money growth target ranges are appropriate and consistent with our goal of achieving noninflationary economic growth.

The economy has borne the burden of high interest rates for many years. The prime rate has been in double digits since late 1978. We are all well aware of the extreme hardship these rates have imposed on the economy in general and particularly in interest-sensitive sectors. These hardships cannot be denied nor should they be minimized. To the contrary, we understand and share the concerns of the Congress and the public about the economic distress caused by high interest rates.

Sympathy, however, does not solve the problem. Nor does political rhetoric about the evils of high interest rates. We are all certainly eager to have interest rates fall, but a meaningful and permanent decline is possible only when we remove the underlying causes of the pressures which have maintained interest rates at high levels.

IN ORDER TO REDUCE INFLATION AND INTEREST RATES

The fundamental cause of high nominal interest rates is inflation and inflationary expectations, and the fundamental cause of inflation is excessive monetary expansion. This is why a credible, permanent deceleration of money growth is imperative. Monetary discipline is a prerequisite to the price stability and lower interest rates that we all desire and all recognize as essential for real economic growth.

Despite a dramatic decline in inflation over recent months, market interest rates remain high. It has, therefore, become commonplace to compare current market interest rates to current inflation rates and to conclude that real interest rates are higher than they have been since the Great Depression.

It is true that the difference between current interest and inflation rates is higher now than since 1933. It is not, however, the difference between current interest and inflation rates that is relevant to economic activity. Business and investment decisions are based on the rate of inflation that is expected to occur over the life of an investment. In an ideal world of price stability, the expected and current rates of inflation would be equal, or nearly so. In the current environment this is not the case, as financial market participants have not adjusted their inflationary expectations downward as rapidly as actual inflation has declined.

Similarly, during the mid-1970's, inflationary expectations were not adjusted upward as rapidly as actual inflation accelerated. Despite rising inflation rates, future inflation rates were for several years consistently underestimated. The difference between market interest rates and actual inflation rates was, therefore, negative. This experience, coupled with the repeated failure of government to deliver on promises of effective anti-inflationary policies, had a profound effect on the markets' expectations about future inflation.

Just as the markets' failure to anticipate rising inflation in the 1970's kept market interest rates artificially lows relative to actual inflation rates at the time, the expectation that high inflation rates will continue in the future is a primary factor in keeping interest rates high now. This is the legacy of a decade of accelerating inflation—inflationary psychology and expectations are deeply embedded in our economic behavior and institutions. Interest rates will fall only when financial market participants become convinced that inflation will not resurge and therefore adjust their inflationary expectations downward, in line with current inflation rates.

The task before us—the administration, the Congress and the Federal Reserve—is to pursue policies that will hasten the downward adjustment of inflationary expectations and allow interest rates to fall. This will require economic policies and actions that not only yield continued progress on actual inflation, but also minimize uncertainty about future policy. If we want interest rates to fall—and we most certainly do—then three things are vital. First, the Federal Reserve must continue to pursue its policy of noninflationary money growth; to reiterate, the Federal Reserve has the unqualified support of the administration in that policy. Second, the Federal Reserve should make a stronger effort to reduce the significant, sharp swings in money growth which have slowed the adjustment of market expectations to the basic antiinflationary monetary policy. Third, the Congress and the administration must come to a meaningful agreement on the budget; by meaningful, I mean actions which clearly indicate that the Federal Government has the discipline to limit the growth of public spending. Without that discipline, the credit and investment markets will foresee ongoing Government revenue and financing problems. These problems imply higher taxes and/or inflation in the future.

MONEY GROWTH SHOULD NOT BE ACCELERATED

Any reacceleration of money growth would have disastrous effects on our long-run goal of price stability and permanently lower interest rates. Instead, faster money growth would soon rekindle inflationary pressures and refuel inflationary expectations. Interest rates would rise quickly and rapidly, reducing greatly the potential for future output and employment growth. The administration, therefore, strongly opposes any proposal to increase the rate of money growth or to raise the money growth targets.

The record of the 1970's clearly shows that a little more inflation cannot be traded for more production and employment over the long run. Any boost to production and employment that comes from accelerating money growth is temporary because faster money growth causes inflation and pushes interest rates up. The lasting effects of excessive money growth—accelerating inflation, escalating interest rates and a deterioration of the incentives to save and invest—are powerful and pervasive deterrents to sustained economic growth. Sustainable economic expansion requires a financial system based on a reliable dollar. That means monetary discipline.

BECAUSE IT WOULD SIGNAL END TO ANTI-INFLATION MONEY POLICY

Over the past year uncertainty about economic policy in general and long-run monetary policy in particular has been an important factor in keeping interest rates high, even as inflation has fallen. Reaccelerating money growth or raising the money growth targets would only add to that uncertainty. It would signal to the financial markets that their worst fears and doubts are true—that the Government cannot be relied on to adhere to noninflationary monetary policy over the long run; that anyone who bets on inflation coming down and staying down—that is, anyone who lends money at a lower interest rate—can count on losing that money. This is the skepticism that has worked to keep rates high as inflation has declined. A sustained increase in the rate of money growth or an increase in the money growth targets would reinforce and justify that skepticism, add to the intransigence of inflationary expectations, and thereby push rates higher than they already are.

Furthermore, the fact that suggestions to increase money growth are being offered and discussed adds to the uncertainty and skepticism over future monetary policy intentions. Discussions, proposals, and political pressures to increase money growth are themselves contributing to the problem of high interest rates by adding to the markets' fears that the Fed will give in to the pressures and return to inflationary money growth.

WHY WE SET TARGETS FOR MONEY GROWTH

It is useful, I believe, to review why it is that we set targets for monetary growth. In the first instance, the purpose of money growth targets is to provide discipline and an explicit measure against which to judge a central bank's performance. In addition, effective money growth targets tell the financial markets, and business and investment planners, what they can expect from the central bank in the year or years ahead. In countries that have been successful at long-term money growth targeting—such as Switzerland, Japan, and West Germany—the certainty and stability associated with setting and consistently achieving announced money targets has contributed to high rates of saving, investment, and economic growth. In those countries, the targets have become a meaningful policy statement on which the business and investment communities can rely; predictable monetary trends minimize uncertainty and provide a stable economic background in which savers and investors can more confidently plan and commit resources.

When they began to implement the current policy of slowing the trend growth of money, the Federal Reserve unfortunately had no such record of consistency. While significant problems remain, the Federal Reserve has been able over the past year and a half to build the credibility of their commitment to achieving a noninflationary rate of monetary expansion. That gain in credibility would quickly be eroded by an increase in the money targets, or actions to allow above-target money growth over the long run.

The value of money growth targets—in imposing discipline and acting as a messenger of the Fed's intentions—is greatly diminished if they are consistently not achieved or if they are changed at will. This was recognized by the Congress and acknowledged in the provisions of the Humphrey-Hawkins Act, which requires the Federal Reserve to set annual monetary targets at the beginning of each year. This move ended the prior practice of base drift, where targets were reset every 3 months, and provided no discipline on monetary creation. In the current environment, the continuing need for stable and credible monetary policy cannot be overstated. Monetary targeting can be an important device for promoting credibility and reducing uncertainty, but it cannot serve that function if we consistently excuse errors and redefine the targets.

HIGH RATES NOT THE RESULT OF TIGHT MONEY

Those who advocate reaccelerating money growth or raising the targets are misinformed when they assert that these changes are the route to lower interest rates. Anyone who still believes that high interest rates are the result of tight monetary policy has not been paying much attention to recent history. When the prime rate first broke the 20-percent level in the spring of 1980, money had increased 7.8 percent over the preceding year. During the second half of 1980, money grew at an annual compound rate in excess of 13 percent—the highest rate ever recorded for a 6-month period—and in December the prime rate reached its alltime high of 21.5 percent.

In the 6 months ending in April of this year, M_1 grew at an annual compound rate of 9.1 percent, well above the Fed's announced targets. This cannot be characterized as "tight" money; by historical standards, this is an extremely rapid rate of money growth. Yet interest rates have not fallen since last fall; in fact, they began to rise in November when the accelerated pace of money growth became evident. By comparison, in the preceding 6-month period ending last October, M_1 actually fell slightly; interest rates began to fall last summer and fell dramatically during the fall. Excluding the period of time in 1980 when interest rates were artificially depressed by credit controls, the longest and largest decline in interest rates since 1974–75 occurred from July to November 1981; that decline coincided with a period of sustained monetary restraint. The record clearly contradicts the common notion that high interest rates are the result of "tight" monetary policy.

The belief that faster money growth will reduce interest rates is based on a fundamental and common confusion between money and credit. Those who advocate faster money growth really want to increase real credit growth. The administration shares that goal, and the economic recovery program is designed to achieve that aim by providing incentives for increased real saving. Faster money growth will not do it. Faster money growth would not provide more real credit to the housing market or reduce the interest rates which a small business must pay to borrow. Faster money growth provides only more money, not more credit. Indeed, faster money growth would probably mean that less real credit would be available, and it certainly means higher nominal interest rates. The way to increase credit availability is to stimulate saving. The Government can contribute through tax incentives to saving and by removing the greatest disincentive to save of all—inflation.

Thus, the proposed "solution" of increasing money growth would make our high interest rate-tight credit situation worse. The inflation and inflationary expectations caused by an actual or threatened acceleration of money growth would, first, push interest rates higher; second, it would further erode incentives to save and thereby further restrict the supply of credit flowing into financial markets and institutions.

DEFICIT PROBLEM ADDS TO UNCERTAINTY

Concern about the size and resolution of the deficit problem is also adding to financial market uncertainty and reinforcing sensitivity in the credit markets to any indication that monetary discipline might be relaxed. In this sense, the deficit issue is helping to keep interest rates high. Despite the now-common belief that any method for reducing the budget deficit will assure that interest rates fall, we cannot count on that happening unless the budget resolution is a meaningful one. That is, a budget resolution that acknowledges the burden that the uncontrolled growth of Government spending imposes on society and the economy.

The Federal Government will face continuing budget crises until we move effectively to contain the growth of Government spending. In the past decade, Government spending has grown more rapidly than the economy as a whole, rising as a share of GNP from 20 percent in 1970 to 23 percent in 1981, and to over 24 percent in early 1982.

MUST CUT GOVERNMENT SPENDING

We must face the fact that any Government spending—no matter how well-intentioned its goals or beneficial its impact—imposes costs on the economy. In the short term, Government spending can be financed three ways—through taxation, by creating new money or by borrowing. Ultimately, however, only two sources of revenue are available—direct taxation or inflation. Taxation can erode incentives of individuals to work and save and the incentives of business to produce and invest. Not only does this decrease the ability of the economy to support Government spending, but it also increases pressure for even more Government spending. Money creation causes inflation and inflationary expectations, which also erode incentives to save and invest. The method is different, but the result is the same. In addition, excessive money growth leads to high interest rates which choke off real economic growth.

Therefore, the situation can be stated simply: if we are to allow Government spending to grow unchecked as it has over the past several decades, we must be willing to accept accelerating inflation—and the escalating interest rates that go with it—and/or high and rising tax rates. There are no other choices, and the curent situation in financial markets should be heeded as a sign that the public is aware.

FEAR OF POLITICAL PRESSURES TO MONETIZE DEFICIT

The financial markets fear that if large deficits persist, the Federal Reserve will be pressured into monetizing the deficit and thereby financing spending by creating new money. These fears are aggravated by congressional statements about the need for faster money growth. The financial markets are already extremely concerned that the Fed will revert to inflationary money growth. Any signals that the Fed is coming under political pressure to do so only adds to the concern that inflationary money growth again will be used to boost an economic recovery. That skepticism helps keep interest rates high.

NO TRADE-OFF BETWEEN MONETARY AND FISCAL POLICY

Some proposals to reaccelerate the rate of money growth rest on the premise that a greater degree of fiscal restraint can be traded for some degree of monetary ease. I hear this argument frequently. This implies that monetary and fiscal policies can be substituted for each other and that a budget compromise can be paired with an easing of monetary policy. The role of monetary policy in the economy is separate and distinct from the role of fiscal policy. It is not a matter of more of one versus less of the other. Instead, prudent noninflationary monetary policy and disciplined fiscal policy should be viewed as complementary policies to promote price stability and economic growth.

The division of responsibility between monetary and fiscal policies is clear. The role of monetary policy is to restore the soundness of the dollar or, in the popular jargon, to eliminate inflation. That requires holding the growth of the money supply in line with the long-term growth potential of the economy. The role of fiscal policy, in the current environment, is to encourage a shift in resource use from consumption to investment, in order to stimulate growth of the economy's productive potential. Reduction of inflation reinforces that effort and the two together provide the necessary ingredients for expanded job opportunities and increased standards of living.

FED MUST CONTINUE TO IMPROVE MONEY GROWTH RECORD

During the past year the Federal Reserve has made progress toward establishing a credible, noninflationary monetary policy. They have not yet totally achieved that goal and their record could be improved. Money growth continues to be extremely volatile. Given the current budgetary uncertainty and the history of monetary policy in the 1960's and 1970's, such erratic money growth has encouraged skepticism about longrun monetary control. The Treasury has gathered substantial evidence that the markets' reaction to variable money growth has been a major factor in maintaining the high levels of interest rates. In my view, the Federal Reserve could reduce monetary volatility by making technical changes in their operating procedures.

But with these caveats aside, the Federal Reserve has, on balance, reduced the rate of money growth toward a noninflationary pace. Monetary policy is moving in a direction that is consistent with sustained, noninflationary economic growth. It is now up to those of us who are responsible for the rest of economic policy to follow suit. That means we must persevere in bringing the growth of Government spending under control. It also means that we must stop cajoling the Federal Reserve to return to the inflationary policies of the past. While the transition to lower inflation has been made more costly than necessary, the odds are that the worst is behind us. It is now imperative that we not throw away the gains by repeating the same mistake that has been made frequently in the past—the mistake of presuming that turning on the monetary spigot provides the cure for all our economic ills.

The problem in the financial markets is basically one in which a policy of an undisciplined Government spending, which requires inflation to be sustained, is colliding with a monetary policy that is no longer providing inflationary money growth. In the past decade, government spending has been financed by inflation and a tax system that guaranteed ever-rising tax revenues. As long as inflation accelerates, proliferating Government spending can be financed without prospective large budget deficits. But the Federal Reserve has now curtailed inflationary money growth and the Government can no longer count on inflation to finance increased spending.

Proposals to reaccelerate money growth are equivalent to advocating a return to accelerating inflation. It is important that we recognize, and remember, the economic costs of surrendering to continued inflation. The very sectors that are suffering now—farmers, the auto industry, small businesses, homebuilders, and the thrift industry—would only be damaged further by a resurgence of inflation. There is evidence of the insidious effects of inflation all around us. Our lagging saving rate, declining productivity, and our inability to compete with many foreign producers—these are all legacies of a decade of inflation. We will never cure these fundamental problems by continuing to pursue the inflationary policies of the past.

Representative REUSS. Thank you, Secretary Sprinkel.

WHY ARE SHORT-TERM RATES SO HIGH?

You say repeatedly that the prime reason for why interest rates are so high is expectation of future inflation.

In view of the fact that the administration has been pointing with pride to the fact that the inflation rate is currently down markedly from what it was, why should short-term interest rates be as high? If I want to lend you money for 90 days, I'm not going to be inundated by inflation by the time you repay me. Why do I demand a historically outrageous rate on short term?

Mr. SPRINKEL. We can't be certain, but the discussion that went on prior to my testimony is relevant, I think. Many corporations cannot get into the long-term bond market at rates they consider attractive. Even the Treasury has to pay 14 percent or more and corporations pay higher than that, and yet they must finance their activities. Therefore, they're financing it short term at very high rates of interest.

There has been a sharp reduction in profitability in most companies and industries, which means they are not generating as much cash internally. This adds to the short-term pressures. I would expect in the months ahead that that will gradually recede. There's some evidence even recently, but we can't be certain. That's my best guess as to why short-term rates are staying so high.

INTERVENTION IN EXCHANGE MARKETS

Representative REUSS. Turning to another field, international money, you have consistently taken the position that intervention in exchange markets by our country should be confined to cases of disorderly conditions and, as you know, this committee has been fully supportive of your position.

Have you changed that position since Versailles?

Mr. SPRINKEL. No, sir. The statement that we made, I believe in March of 1981, was that we would intervene in periods of disorderly markets, but under most circumstances the market would determine the rate of the dollar vis-a-vis other currencies.

That was the statement coming out of Versailles. That was the statement we made early on. There's been no change. I can read the exact statement from the Versailles communique, if I can find it. "We are ready, if necessary, to use intervention in exchange markets to counter disorderly conditions as provided for under article IV of the IMF Articles of Agreement," that is the same statement we made well over a year ago.

Representative REUSS. I don't know whether you made it for the first time before this committee, but we discussed it and the committee, both informally and formally, agreed with you.

IMF STUDY OF EXCHANGE INTERVENTION

What about this study that the IMF has launched, as I read the terms of reference of the study, to look at history and to determine whether intervention in conditions other than disorderly may be good. Do you think that study is going to get anywhere?

Mr. SPRINKEL. There has been some confusion in the press reports about that study and about an exercise that the G-5 pledges to undertake concerning convergence—an attempt to get convergence of economic policy designed to bring low inflation and higher growth.

The IMF is directly involved in the latter. At this moment, they are not directly involved in the former.

Representative REUSS. Let's talk about the former. Who is involved in the study entitled, "Intervention: Is It Good for You," or whatever it is called, and what do you think it will uncover? Specifically, do you think it will uncover anything which would cause you to change your mind and this committee's mind?

Mr. SPRINKEL. Treasury proposed that study. Secretary Regan announced on a trip some weeks ago to Europe that it would be useful to take a look at the evidence. He stated, "We're from Missouri." I literally am. That is, we want to look at the data.

Now you would think that private researchers would have already done that. The reason they didn't do it or couldn't do it very well is that the data is secret and it's not available. There has been a lot of evidence accumulated, over the last decade, especially the last 8 years, of various governments with different objectives, sometimes intervening in the market in an attempt to either smooth, in some cases, or to change the equilibrium rate in another case. We propose that we should look at all of that data with the purpose of seeing if it was successful and whether it achieved its objectives; or whether it imposed serious costs on the government. For example, it's very easy, as you well know, Mr. Chairman, to lose control of the money supply in a very serious way with major intervention. It doesn't matter whether the Federal Reserve buys government securities or whether they buy marks; they're adding to the monetary base and increasing the money supply.

Our partners agreed that that would be a useful study. I cannot predict what will come out of the study, except that I am insisting it be a careful, well-thought-out academically responsible study.

At the present time, the scope of the study is being determined by deputies of the G-7 deputies—that is, my deputy and deputies from my counterparts. They will be meeting shortly in Paris to begin the first step of organizing the content of the study. Somewhere over the next few months they will decide who will actually do it. I don't know at this stage who might do it. But we are insisting that it be structured in a very careful way to try to see what we can learn.

Now I would add as a footnote that we did a great deal of this with our own intervention data prior to changing our policy early in this administration. We looked at examples where there had been massive support efforts to prevent the dollar from going down, and on other occasions, massive support efforts to prevent the dollar from going up. If there was any degree of success, it wasn't evident to us.

But it clearly created uncertainty in the marketplace. Why would you take a position if you were a dealer in foreign currencies if the Federal Reserve or the Treasury may zap you just as you take your position? We're trying to encourage depth in those markets, and since intervention was not successful in our judgment, and it did encourage uncertainty, that's why we withdrew except during periods of disorderly markets.

So I cannot predict—we will approach it with an open mind. If they have evidence different from our own, I'll be very interested.

Representative REUSS. Isn't it a fact that, as a banker in Chicago and a student and practitioner of international monetary policy and also now as Under Secretary of Treasury in charge of it, you have informed yourself on the course of intervention over the years, both by our own country and by the leading foreign countries?

Mr. SPRINKEL. To the extent I could. There's not a lot of official data.

Representative REUSS. Without being unduly modest, didn't you do a job that you thought was competent?

Mr. SPRINKEL. Yes; but we only looked——

Representative REUSS. Has there been anything in your studies of intervention, both by us and by the other leading industrial democracies, which gives you the slightest belief that intervention other than to combat disorderly conditions is a valid exercise of the monetary power?

Mr. SPRINKEL. Based on all the evidence I've seen up to now, I am convinced that it's a losing game. We risk taxpayer money. Remember, it's not my money—it's not Treasury's money. It's the taxpayers' money. We risk taxpayers' money in a tilting-at-windmills operation that's likely to be very unsuccessful. But I want to look at the rest of the data. I haven't looked at all the data, but I've seen nothing to change my mind up to the moment.

MONETARY TARGETS: THE WEST GERMAN EXAMPLE

Representative REUSS. In your statement, Secretary Sprinkel, you praise West Germany. You say it's a country that's been successful at long-term money growth targeting, and the certainty and stability in setting and consistently achieving announced money targets has contributed to high rates of saving, investment, and economic growth.

Well, I looked at our interesting study of monetary policy in West Germany published just a year ago on June 26, 1981, and that study on page 109 lists the German monetary performance in the heyday of the German economic miracle—that is, the period between 1974 and 1978 before the bloom was off the peach and when Germany was indeed the economic miracle—as consistently erring on the high side of their monetary target.

Their target during those years had an 8-percent growth ceiling, but they were consistently hitting 10 percent, 11 percent, and so on. They never got even close to 8 percent. They were always about 20 percent over.

Therefore, aren't you being too generous to the West Germans when you bestow laurels on them?

Mr. SPRINKEL. Well, one thing one must guard against in comparing their numbers with ours—and I can remember being a little shocked some years ago when I looked into it, the numbers have sort of consistently been higher than ours much of the time—it has a lot to do with the secular trend and turnover of money, or demand for money, however you want to state it—in Germany versus the United States. That is, they have had for a long period of time a record of low inflation and a desire by people to hold German marks. Their secular velocity has been downward whereas ours has been upward. If you use M_1, our secular velocity has been on the order of 3¼ or 3½ percent, in that range; and, of course, what we want to do is to control the total level of spending in order to keep inflation down.

Judged by their inflation record, I think they've done fairly well.

We used to do well, too, and we're going to do well again, but we had a hiatus where we didn't do well. They had some problems with inflation with the oil shocks, but they brought it back down.

So, I think it's still fair to say that of the major countries in recent years, the ones that have done the best are probably the Swiss and the Germans and the Japanese, even though their techniques vary a little bit. They don't even target quite the same series. The Germans have something close to a monetary base, but it's not quite the same as the monetary base.

I am surprised that they were overshooting because the data that I have seen shows them coming in very close to their targets. The Swiss typically undershot their targets. I'll check that data when I get back to the office.

INSTABILITY IN U.S. MONEY GROWTH

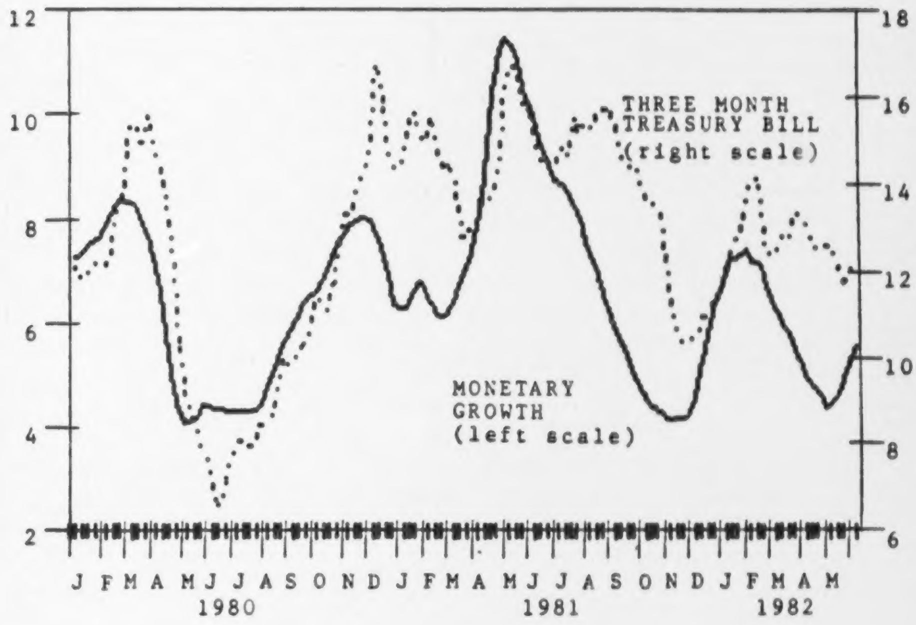
Representative Reuss. One final question by me. During the last 8 or 9 months the Federal Reserve creation of M_1, as you point out, far from being within the 2.5- to 5.5-percent target range, has been close to 9 percent—well over it. Don't you think that that failure to stay within duly constituted targets could have a disquieting effect on markets?

Mr. Sprinkel. Yes. I have a chart which I'll be glad to leave with you.

Representative Reuss. That would be helpful.

[The chart referred to follows:]

Short Term Monetary Growth and
Short Term Interest Rates



Note: Data for M1 are four week moving averages
growth is relative to one-year ago

Mr. SPRINKEL. The chart shows that each time you get an acceleration in money growth, the rates go up and when you get it under control the rates go down. If we look at the base in the last several months it's risen at a very rapid pace, even more rapid than M_1 in some of the periods, and I am concerned. I have testified both before this committee and other congressional committees several times in the past year and a half, and I have various quotes in front of me, which I won't bother you with, urging that we have more stability in money growth. And, I still urge that it should occur, it would result in a significant reduction in interest rates, and that it would result in a better performance for our economy.

We have had extremely volatile money growth, essentially since the fall of 1979.

Representative REUSS. You would agree, then, that an 8- or 9-month exceeding of the targets is not an ideal exercise in monetary policy?

Mr. SPRINKEL. No, sir; I do not believe it's an ideal exercise. You're correct.

Representative REUSS. We have a vote on the rule which we have to make. Would you be kind enough to chat with our old friend, Bob, or do anything else during the 5 minutes? We'll stand in recess.

[A short recess was taken.]

Representative RICHMOND [presiding]. Thank you for waiting, Mr. Secretary. As you know, we just voted the rule on you budget.

Mr. SPRINKEL. Marvelous.

ARE TAX REDUCTIONS GOOD POLICY NOW?

Representative RICHMOND. I'd like to discuss taxes with you, even though we're discussing interest rates and monetary policy. How do you feel about the administration's policy of reducing taxes in face of inflation, deficits, the national and international recession? Do you think the policy of the administration of reducing corporate and personal income taxes is a valid policy in times like these?

Mr. SPRINKEL. Yes, sir. Based on a lot of evidence from a lot of countries over a very long period of time, if you want to get response in terms of encouraging savings, in terms of encouraging investment, you must provide incentives. And that means you must permit earners of money to keep more of it for themselves. That's one part of it. It does provides incentives.

Representative RICHMOND. They don't do that in Germany and Japan.

Mr. SPRINKEL. They both have higher——

Representative RICHMOND. Effectively, Germany and Japan have a 50-percent corporate tax rate and a much, much higher personal income tax rate.

Mr. SPRINKEL. They've had much lower levels of inflation, as we pointed out. They also have induced a much higher level of savings, especially Japan, than we've been able to do in this country.

Representative RICHMOND. Why?

Mr. SPRINKEL. Because of the incentives provided, because of the lower level of inflation.

Representative RICHMOND. They have induced a higher level of savings for many reasons. First of all, they so limit consumer credit that it's impossible for a consumer to go out and buy on credit; therefore he must have cash, therefore he has to have savings. As you know and I know, the reason for the high consumer savings in Japan is, first of all, those savings are tax-free when those savings go toward a house. Second, you can't get a mortgage on a house unless you put down at least a 50-percent downpayment. Therefore, the Japanese Government artificially creates these forced savings.

Mr. SPRINKEL. I don't consider it artificial to let people have a higher rate of return on savings, and that's what they do.

DOES PUBLIC WANT LOWER TAXES?

Representative RICHMOND. Why don't you come out with a policy giving the American people a tax-free rate for some of their base savings the way the Japanese do? Why do we have a policy of reducing taxes—even after we've had survey after survey in the United States proving that the American people don't want their taxes reduced?

Mr. SPRINKEL. I don't know what surveys you read, sir.

Representative RICHMOND. Mr. Secretary, you and I know, in recent surveys the American people are much more worried about inflation than they are about taxes.

Mr. SPRINKEL. I have yet to find a taxpayer that told me he would like to have higher taxes, but I realize the Congress sometimes acts that way.

Representative RICHMOND. You've found taxpayers who say they prefer higher taxes to higher inflation, correct?

Mr. SPRINKEL. That's a different statement.

Representative Richmond. That's the statement I made.

Mr. SPRINKEL. Higher taxes do not prevent higher inflation. Lower money growth prevents higher inflation, and that's what my testimony is all about.

Representative RICHMOND. I find myself in agreement on your statement on lower money growth. However, you who direct American monetary policy——

Mr. SPRINKEL. I wish sometimes I did, but I don't.

ADMINISTRATION HAS NO PLAN TO DEAL WITH RECESSION

Representative RICHMOND. Well, you're the Under Secretary for Monetary Affairs. I just wonder how you plan to direct us out of the mess we're in right now—where you have lower taxes, an incredible and mounting Federal deficit, a recession which is deepening into a depression throughout the United States, the highest rate of bankruptcies since the Great Depression. We're in deep, deep trouble and you're offering—I read your statement closely—nothing to get us out of the trouble. I'd like to know what you plan to do.

Mr. SPRINKEL. We've offered a great deal to get out of trouble.

Representative RICHMOND. What? A higher budget, higher defense spending, lower taxes? That's not going to get us out of trouble.

Mr. **Sprinkel**. I have watched this town from afar for many years, and I've found that when you raise taxes to balance budgets—I used the words perspective budgets in my statement because they always look like they're going to balance out there, especially when you have good inflation going for you—they never balance. And the reason they don't balance is that there are great pressures, to increase spending. I prefer lower Government spending, not higher Government spending, and so does this administration.

Representative **Richmond**. Where would you cut Government spending?

Mr. **Sprinkel**. I thought this testimony was on monetary issues, but I think we have to cut it across the board except in the defense area.

Representative **Richmond**. Oh, except in defense?

Mr. **Sprinkel**. Yes; I think it is very important that we maintain a strong defense so that we can negotiate with the Russians to get armaments down. You do not win from a weak stance. You must show you have strength.

Representative **Richmond**. Even though everyone from Secretary Weinberger down—Secretary Weinberger, when he was being confirmed, in fact—indicated that there was a lot of fat and waste in the Pentagon, you don't feel there's a dime's worth of fat or waste in the Pentagon?

GOVERNMENT WASTE

Mr. **Sprinkel**. We've supported getting rid of fat and waste in all sectors, including the Treasury.

Representative **Richmond**. There's no support for getting rid of fat and waste in the Defense Department, even though the Secretary at his confirmation hearings indicated that there was at least $10 billion of fat and waste that could be cut out. Suddenly, after he was confirmed, he forgot that.

Mr. **Sprinkel**. I'm not at all certain that's true. It's my understanding he has worked to get the Defense Department more efficient, but I'm not an expert in that field.

DON'T CUT SPENDING TO BALANCE BUDGET

Representative **Richmond**. So, you believe we ought to cut everything else except defense?

Mr. **Sprinkel**. I think we have to slow the rates of rise. We're not cutting most of these programs, sir, as you know.

Representative **Richmond**. We're cutting many programs.

Mr. **Sprinkel**. We're slowing the rise.

Representative **Richmond**. When you have national unemployment which is at historically high rates and you cut food stamps or you, quote don't increase food stamps unquote, you're actually cutting food stamps because food stamps is the only emergency nutrition program left for people out of work.

Mr. **Sprinkel**. The budget presented by the President was an all-time high budget, I'm sorry to say. That is, there was no cut net to it.

Representative **Richmond**. Due to enormous amounts for defense and due to enormous amounts for Government interest.

Mr. **Sprinkel**. Yes, and that's part of the testimony I gave this morning. How can we get that interest rate down so that we can get that cost down? I stressed the private sector because they're really hurting, but it's also true of our budget. We spend something on the order of a little less than a $100 billion a year, I believe, financing that debt, that horrible debt, that very large debt that we have, and much of it is short term. If we succeed in a disciplined monetary-fiscal policy over the next few years, those rates will come down and there will be a very sharp reduction in the rates that we have to pay to finance the debt.

INSTEAD, RAISE TAXES

Representative **Richmond**. I believe we have to show some self-discipline by reducing our budget deficit by increasing taxes. As you know, the Democratic budget and the Republican budget, which we're debating right this minute, are virtually the same in total dollar figures.

Mr. **Sprinkel**. Around $100 billion.

Representative **Richmond**. And you and I know that $100 billion figure isn't a true figure anyway because the income we actually get will be less than what we expect this next year. There will be a tremendous shortfall because, as you know, corporations aren't doing well. When a corporation doesn't do well, not only doesn't it pay the income taxes it plans to pay, it usually writes everything down because it uses that year to clean house. Therefore, I expect that the projected income is going to be vastly vastly less than we expect to get and I'm positive that our deficit is going to hit much closer to $160 or $170 billion.

Mr. **Sprinkel**. That's true.

Representative **Richmond**. Which, in effect, takes care of all the American savings for the entire year. Now, with that staring you in the face, you know I'm completely right. How are we going to get into some reasonable fiscal policy until we raise taxes?

Mr. **Sprinkel**. I do not consider it desirable discipline to continue to foist off on the taxpayer higher and higher taxes. I do consider it desirable that we exercise restraint on spending.

Now the President in his compromise—in his attempted compromise with the leaders—did opt for some tax increases reluctantly. And I'm sure that when the bill—if it does come out of the House and then out of the conference committee—there will be some tax increases. If they're modest, I suspect the President will buy them. But the emphasis must be on restraining spending, not raising taxes.

Representative **Richmond**. I wish you would tell me where we can restrain spending without physically hurting people; and second, no matter how much we restrain spending, you're still going to hit a deficit of around $140, $150, or $160 billion which will effectively keep interest rates at the alltime high they are now, which effectively keeps businesses from going back to work.

We face a miserable catch-22 situation here, and I don't seem to be getting any answers from Treasury.

Mr. **Sprinkel**. Two points. As you know, in the early phase of a recovery—because of the lag effect—you tend to have large deficits and it would not be surprising that this current fiscal year deficit will be a significantly large one.

Now inflation has come down, and we hope it will stay down, and that tends to keep revenues down, but we must also have restraint on spending as you get inflation down. Now it is not a close relation, sir——

WHY INFLATION HAS GONE DOWN

Representative **Richmond**. Mr. Secretary, why is inflation down?

Mr. **Sprinkel**. Primarily because of monetary restraint over the past couple years.

Representative **Richmond**. You want to know why inflation is down? Because major business is at virtually an alltime low; they're renegotiating labor contracts. Businesses are at the brink of bankruptcy, and it causes a deflationary trend. I don't know of a corporation today in heavy industry that isn't busily renegotiating its labor contracts.

Mr. **Sprinkel**. I agree.

Representative **Richmond**. Due to the fact that they can't stay in business.

Mr. **Sprinkel**. The cost of getting inflation down is not zero. That's why we do not want to let that genie out of the box again.

LACK OF INDUSTRIAL MODERNIZATION

Representative **Richmond**. What I want to know from you is how is business going to get back to work, modernize, borrow money at a rate reasonable enough so they can afford to buy new equipment. Because God knows we need new equipment in this country, don't we?

Mr. **Sprinkel**. Yes, sir.

Representative **Richmond**. We're so far behind Germany and Japan in modern technology it's frightening. Now how are we ever going to lay our hands on money which is amortizable? Certainly 18-percent money is not amortizable, as you and I know. When is American business going to be able to go out and borrow money at reasonable rates to afford to improve?

Mr. **Sprinkel**. As soon as the financial markets——

Representative **Richmond**. That, to me, is your main problem.

Mr. **Sprinkel**. I agree with you.

Representative **Richmond**. There's no problem more important than that because once American business retools we'll be competitive in the world, and we're not competitive anymore.

Mr. **Sprinkel**. That's exactly why I was very pleased to accept the invitation to appear before this committee because that is the problem today. I think the recovery is about to start, but that doesn't mean the end of our problems.

The problem is that interest rates are too high, and we've got to get them down.

Representative **Richmond**. Interest rates are too high to allow American business to go back to work.

Mr. **Sprinkel**. That's correct. I agree with you.

Representative **Richmond**. The average company, as you know, must go out and borrow money in order to retool. Very few companies have enough cash to handle their own retooling, their own refactoring. Machinery, equipment, and buildings are commonly long-term capital items, right; and you borrow money for that? Now how can the average company go out and borrow money at 18 percent to become competitive in the world market?

Mr. **Sprinkel**. They can't. We must get the rates down.

Representative **Richmond**. How are you going to get the rates down if you don't decrease the Federal deficit? How are you going to decrease the Federal deficit unless you increase taxes selectively?

Mr. **Sprinkel**. There is not——

USER FEES: A VIABLE ALTERNATIVE

Representative **Richmond**. As you know, the chairman and I had a budget proposal this year called the share the burden budget, which, among other things, would have imposed a series of user fees in the United States whereby people who use various facilities and services of the Federal Government would pay for them. The share the burden budget would have saved us $44 billion, but we can't get it off the ground.

Mr. **Sprinkel**. We proposed the same step, to increase user fees.

Representative **Richmond**. And you can't get it off the ground either?

Mr. **Sprinkel**. Apparently, at least not completely.

Representative **Richmond**. In other words, you and I agree that increased user fees—such as increasing the highway trust fund—which hasn't increased since 1954, would certainly be very helpful to the economy, wouldn't they?

Mr. **Sprinkel**. Well, we believe that people that use services of the Government, where it's possible, should pay for those services.

Representative **Richmond**. Now if they did that and a number of other essential, equitable changes, I think that would cut our deficit by practically 50 percent. How do you feel about consumer interest? Do you feel consumer interest ought to be deductible?

Mr. **Sprinkel**. Could I answer the other question that you raised? How do we get interest rates down?

Representative **Richmond**. Yes.

LOWERING INTEREST RATES: ADMINISTRATION VIEW

Mr. **Sprinkel**. There is no quick and easy way. It involves continued monetary discipline, reducing volatility in money, fiscal discipline in terms of restraint on spending, and gradually reducing those out-year deficits. There is no—despited the fact that many believe this—statistical relation that I can find between the level of deficits and the level of interest rates, although that's generally assumed to be a fact.

It isn't the size of the deficit that primarily causes the high interest rates. It's the level of inflation rates and expected inflation rates that causes high interest rates. And there's not a close correlation between the size of the deficit and the inflation rate. Now we want to get the deficit down because it does raise fears that it may be financed with new money out there, in which case we will get more inflation; or even if it isn't financed with new money, it means that savings will be absorbed, as you pointed out, to finance the deficit and thus can't go into capital spending.

So for all these reasons, we want to encourage capital formation and therefore reduce the deficit and keep money more stable. That's what you, the Congress—us, the administration—and the Federal Reserve jointly can do to contribute to an acceleration of the decline in interest rates.

Representative RICHMOND. Unfortunately, neither of these budgets we're debating right now actually address itselt to that problem. Both the budgets are virtually the same in final outcome. One is giving a little more to defense and the other is giving a little more to human services.

Mr. SPRINKEL. But the out-year deficits, when they're considered, presumably will be coming down—probably not to zero, but at least——

Representative RICHMOND. We don't need a zero deficit, but we certainly can't live with a $150 billion deficit.

Mr. SPRINKEL. I share your view.

RELATION BETWEEN DEFICIT AND INTEREST RATES

Representative RICHMOND. You share my view. You still feel, though, that we shouldn't raise taxes at least temporarily in order to reduce some of these deficits, which would, in turn, reduce interest rates which would, in turn, allow business to go out and borrow money.

Mr. SPRINKEL. The administration is not opposed——

Representative RICHMOND. Look how simple it would be. If we reduced the deficit by increasing user fees, ending deductibility of consumer interest, and so forth, pick up an extra $50 billion in tax revenues, and reduced our deficits, interest rates would have to go down.

Mr. SPRINKEL. I just pointed out that there's no relation that I can find between the level of the deficit and the level of interest rates. If you have such a relation, please send it to me. I have asked hundreds of people to send it to me.

Representative RICHMOND. Mr. Secretary, when we get to the point where the Federal Government is sopping up all the money in the United States, you must agree that that would cause the interest rates to stay up.

Mr. SPRINKEL. You're also assuming, of course, that substantial tax increases will in fact cut deficits, and the history of the last decade is that substantial tax increases lead to substantial spending increases and you keep the deficit anyway. You and I want to stop that and that's why we have to keep the restraint on the spending side.

Representative RICHMOND. I think this Congress, as you know, is not for increasing spending on an ongoing basis. Many people in this Congress believe in a balanced budget. Of course, a balanced budget is a figment of somebody's imagination, but a budget within reasonable balance is what we all should be looking toward.

Mr. SPRINKEL. Yes, sir.

Representative **Richmond**. We agree?

Mr. **Sprinkel**. Yes, sir.

Representative **Richmond**. And you can't get a budget within reasonable balance. The administration budget isn't within reasonable balance, and the out-years are even worse.

Mr. **Sprinkel**. That was before any policy change was applied. That is, if you just stay where you are and let nature take its course—that wasn't what the President proposed—you found budget deficits in the $150 to $170 billion range. That was not our proposal. We had a budget which brought them down.

Representative **Richmond**. The President's latest budget, particularly for the out-years, is horrifying, right, when it comes to deficits?

"WE CAN'T LIVE WITH" $150 BILLION DEFICIT

Mr. **Sprinkel**. We have to bring it down. That's the exercise that Congress is engaged in today. No one argues that we should take tax changes or spending changes that lead to zero deficits in this next fiscal year. There's no way that could happen. We recognize that.

Representative **Richmond**. But I think we all agree that a $150 billion deficit is something we can't live with.

Mr. **Sprinkel**. It would not be a desirable long-term trend.

Representative **Richmond**. Mr. Secretary, you and I find ourselves in rare agreement. It's a pleasure seeing you. I really appreciate your waiting. Thank you.

At the request of Senator Jepsen, I would like to include at this point in the record an article entitled "Which Money Is Money: M_1 or M_2?"

[The article referred to follows:]

WHICH MONEY IS MONEY: M_1 OR M_2?

(By Robert E. Weintraub [1])

In recent months, a number of persons, including Federal Reserve officers, have argued that it no longer makes sense to use M_1 growth as the target of monetary policy. They urge the Federal Reserve to discard M_1 and focus on M_2 growth. I believe that this would be a mistake. If any change is made at this time, it should be to drop the M_2 target and focus on M_1 growth. M_1 growth is preferred to M_2 growth as the target of monetary policy for three reasons. These reasons, and the arguments for them, were originally set forth in the views of the Republican Members of the Joint Economic Committee in their 1982 Joint Economic Report. It is useful to review them here.

Reason number one stems from the fact that M_2 includes overnight RP's, Eurodollars, savings accounts, small denomination time deposits, and money market mutual funds. These accounts are interest sensitive. As a result, M_2 growth is highly susceptible to interest rate influences. In contrast, M_1 growth is only marginally sensitive to these influences. Because M_2 growth is relatively sensitive to interest rate influences, it is relatively difficult to know what target growth to set for M_2, especially in inflation and recession periods.

The underlying reason for this is that overall economic conditions and trends dominate the determination of interest rates. High and/or rising interest rates are observed in periods of high and/or rising inflation. Falling interest rates are observed in recessions and the early stages of recovery periods. Because M_2 growth is sensitive to interest rate levels and changes, it is significantly influenced by economic conditions and trends. In recent years, as discussed below, M_2 growth has tended to accelerate in inflationary periods and to slow in recessions. As a result, with M_2 growth the target, the Federal Reserve could be fooled in future years into thinking that it has not acted sufficiently vigorously to slow money growth in inflationary periods, or to accelerate it in recessions, when in fact it had. The Fed could be led thereby into setting targets that are unnecessarily draconian in inflationary periods and targets that would rekindle inflation in as well as promote recovery in recession periods. The relative insensitivity of M_1 growth to interest rates is a powerful reason for using it, and not M_2 growth, as the target of monetary policy.

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[1] Joint Economic Committee, Republican staff member.

Reason number two for preferring M_1 growth to M_2 growth arises from the fact that the response of the latter to changes in interest rates or, more broadly, business conditions is unstable. For sure, it has been changing. That makes it risky to use historic relationships between M_2 growth and changes in economic performance variables as guides in setting M_2 growth targets now and in future years. The point is elaborated upon below.

In times past—for example, in 1966, 1969, and early in 1970—M_2 growth tended to fall sharply in periods when interest rates rose and to rise sharply in periods when interest rates fell. That meant that we could expect M_2 growth to accelerate in recessions and provide a foundation for recovery, and to slow in booms and sow the seeds of every boom period's end. Historically, M_2 growth was a good leading indicator of the economy's performance. But that has now changed.

The reason for the change is that, as interest rates rose over the years, and especially since 1977, the importance of savings deposits in M_2 has declined while the weights in M_2 of both small denomination time deposits and money market mutual funds have increased. The growths of these latter components respond differently to interest rate changes than does the growth of the savings deposits component of M_2.

When market interest rates fall, the growth of savings deposits accelerates because the interest rate paid on passbook savings does not fall commensurately. When market interest rates increase, savings deposits grow more slowly because the maximum rate payable on passbook savings does not increase commensurately. In contrast, interest rates paid on small denomination time deposits, especially since the introduction of money market certificates, and also interest rates paid on money market mutual funds, tend to move up and down in tandem with market interest rates. As a result, albeit with a short lag, these two components of M_2 grow faster when interest rates rise than when they fall.

In December 1965, savings deposits comprised 56 percent of M_2, and small denomination time deposits 8 percent. Money market mutual funds did not exist. In December 1977, the percentages were: Savings deposits 38 percent; small denomination time deposits 35 percent and MMMF's 0.3 percent.

In December 1981, the percentages were: Savings deposits 18 percent; small denomination time deposits 46 percent and MMMF's 10 percent.

The change in weights makes it risky to use historical relationships between M_2 growth and interest rate trends and business conditions as guides to the future.

For example, from December 1965 to December 1966, the 90-day Treasury bill rate increased from 4.4 percent to 5.0 percent. In response, savings deposits fell 1.5 percent and M_2 grew only 4.7 percent, down substantially from 8.1 percent in the previous December-to-December period. Again, in 1969, when the bill rate rose from 5.9 percent to 7.7 percent, savings deposits fell 2 percent and M_2 growth dropped to 3.8 percent from 8.1 percent in 1968. Based on these and like episodes, in past years, M_2 growth declined when interest rates rose and the confluence of the two usually portended recession. However, in recent years, despite high and generally rising interest rates, and negative savings deposits growth of 2.3 percent in 1978, 12.4 percent in 1979, 5.6 percent in 1980, and 16.0 percent in 1981, M_2 growth remained relatively high and actually increased after 1978. It was 8.3 in 1978, 8.6 percent in 1979, 9.5 percent in 1980, and 10.4 percent in 1981—all measured from December to December. No such shift in response is encountered in the M_1 data, at least not yet.

The third and most important reason for using M_1 growth as the target of monetary policy is that the relationship between yearly percentage changes in current dollar Gross National Product (GNP) and M_1 growth is both close and historically stable. It is better in both respects than the relationship between yearly percentage changes in nominal or current dollar GNP and M_2 growth. If this were not the case, there would be no point in focusing on M_1 growth for, in the final analysis, what all of us are interested in is the economy's performance, not the Federal Reserve's.

In this regard, proponents of M_2 growth or other possible measures of monetary policy argue that, even if focusing on M_1 growth once made sense, it no longer does because of the development and spread in recent years of RP's, Eurodollars, money market certificates, money market mutual funds, ATS accounts, NOW accounts, electronic banking, street banking, zero and minimum balance banking, telephone transfers, credit cards, etc. In essence, they are arguing that the relationship between M_1 growth and nominal GNP growth has shifted in recent years because of these new instruments and techniques, and also that it has become more volatile from one year to the next. However, the facts in-hand do not bear out either one of these contentions.

The difference between nominal GNP growth and M_1 growth is the rate of rise of M_1 velocity. To argue that the relationship between nominal GNP growth and M_1 growth has shifted or become more volatile is therefore to assert that M_1 velocity is now rising at a different average rate than it did in the past, or more unevenly. In this regard, those who advocate that M_1 growth no longer be targeted by the Federal Reserve point to the development and spread of new banking instruments and techniques in recent years. These new instruments and techniques have allowed and impelled the public to decrease its demand for M_1 balances relative to nominal GNP. As a result, M_1's velocity has risen. However, that is not sufficient reason to stop targeting M_1 growth. The crucial point is not that M_1's velocity has increased. The crucial point is whether it has been increasing faster or at least more unevenly in recent years than it did in the late 1950's and early 1960's.

Those who argue that recent developments in money markets and banking have undermined the usefulness and validity of using M_1 growth as the target of monetary policy must show that M_1 velocity is now rising faster than it did in the past, or at least that it is rising more unevenly. Neither of these things can be shown. Nor can it be shown that M_2 velocity rises more evenly than M_1 velocity from one year to the next, or that its average yearly rate of rise from one five- or ten-year period to the next is more stable.

In the last five years—from 1977 to 1981—the average yearly rate of rise of M_1 velocity was 3.59 percent. For the five years preceding that, it was also 3.59 percent. For the period 1967 to 1971, it was only 1.76 percent. Definitely, there was a rise in the rate of rise of M_1 velocity after 1971 in comparison to the 1967 to 1971 period. However, the 1967 to 1971 period is not representative of the years before 1972. For the post-Korean War years, from 1956 to 1966, the yearly rise of M_1 velocity averaged 3.57 percent. In the post World War II years, from 1948 to 1955, it averaged 3.48 percent (excluding 1950 and 1951 when the year-to-year increase soared to 9.27 percent in a buying spree that lasted from Mid-1950 to mid-1951 following the outbreak of war in Korea).

Recent banking and money market developments and innovations have not changed the trend of M_1 velocity anymore than such developments and innovations as CD's, lock boxes, mail banking, Saturday banking, and the growth of the thrift industry did in the 1950's and 1960's. That is the bottom line. The average relationship over two-, three-, four-, and five-year periods between percentage changes in M_1 growth and percentage changes in nominal GNP growth is essentially the same now as it was 15, 20, and 25 years ago. It is a very stable relationship. Nominal GNP has and continues to grow, on average, by 3.6 percent per year plus the average yearly percentage growth in M_1. The constant term (3.6 percent per year) in the relationship is the average yearly rate of rise of M_1 velocity from 1947 to 1981, and also from 1972 to 1981.

In contrast to M_1 velocity's rate of rise, that of M_2, has shifted upward in the most recent five years. From 1977 to 1981, it averaged 1.25 percent per year. From 1972 to 1976, the trend of M_2 velocity was negative. It declined, on average, by .4 percent a year. In the 1967 to 1971 and 1960 to 1966 periods, it also declined; by .1 and .5 percents yearly, respectively.

The data also shows that the volatility of the rate of rise in M_1 velocity is less now than it was in the late 1950's and early 1960's. That means that from one year to the next, the relationship between percentage changes in M_1 and nominal GNP is closer in recent years than it was 15, 20, or 25 years ago. Finally, the data shows that the rate of increase in M_2 velocity is more changeable from one year to the next than that of M_1 velocity, and that its volatility has been increasing.

Relevant statistics are set forth in Tables 1 and 2. Table 1 presents yearly average percentage changes in: The dollar or nominal value of GNP, M_1 velocity in relationship to nominal GNP, and M_2 velocity also in relationship to nominal GNP for the 1956 to 1981 period.

Table 2 groups the M_1 data in two-year and three-year periods.

TABLE 1.—GROSS NATIONAL PRODUCT, MONEY SUPPLY, AND VELOCITY MEASURES

[Year-to-year percent changes, 1956–81]

	Dollars GNF	M_1	M_1 velocity	M_2 velocity
Year:				
1956	5.42	1.17	4.20	....
1957	5.29	.54	4.71	....
1958	1.28	1.17	.11	....
1959	8.49	2.23	6.12	....
1960	3.82	.06	3.76	0.07
1961	3.57	2.06	1.48	−2.97
1962	7.74	2.46	5.15	.03
1963	5.58	3.09	2.42	−2.62
1964	6.88	3.92	2.85	−.90
1965	8.35	4.27	3.92	.23
1966	9.39	4.58	4.60	2.63
1967	5.78	3.98	1.73	−1.12
1968	9.22	7.00	2.07	.76
1969	8.08	5.93	2.03	1.76
1970	5.18	3.78	1.35	1.24
1971	8.55	6.81	1.63	−3.20
1972	10.06	7.19	2.68	−2.18
1973	11.85	7.30	4.24	1.69
1974	8.12	5.01	2.96	1.78
1975	8.03	4.69	3.19	−1.35
1976	10.89	5.71	4.90	−2.05
1977	11.64	7.64	3.72	−1.18
1978	12.41	8.22	3.87	3.22
1979	11.96	7.77	3.89	2.83
1980	8.79	6.26	2.38	−.08
1981	11.28	6.92	4.08	1.45
Using shift adjusted M_1, 1981	11.28	4.62	6.36	....

TABLE 2.—YEARLY PERCENTAGE CHANGE IN GNP, M_1, and M_1 VELOCITY

[2- and 3-yr Nonoverlapping periods, 1956–81]

	Dollars GNP	M_1	M_1 velocity
2-Year period:			
1956–57	5.35	0.86	4.46
1958–59	4.88	1.70	3.12
1960–61	3.69	1.06	2.62
1962–63	6.66	2.78	3.79
1964–65	7.62	4.10	3.39
1966–67	7.59	4.28	3.17
1968–69	8.65	6.47	2.05
1970–71	6.87	5.30	1.49
1972–73	10.96	7.25	3.46
1974–75	8.08	4.85	3.08
1976–77	11.27	6.68	4.31
1978–79	12.19	8.00	3.88
1980–81	10.04	6.59	3.23
3-year period:			
1956–58	4.00	.96	3.01
1959–61	5.29	1.45	3.79
1962–64	6.73	3.16	3.47
1965–67	7.84	4.28	3.42
1968–70	7.49	5.57	1.82
1971–73	10.15	7.10	2.85
1974–76	9.01	5.14	3.68
1977–79	12.00	7.88	3.83
1980–81	10.04	6.59	3.23

It will be clear to every objective observer that M_1 growth has been a reliable and useful gauge of the thrust of monetary policy. Unless future events prove otherwise, and until such time, M_1 growth remains a better target for Federal Reserve policy than M_2 growth.

Representative RICHMOND. The committee stands in recess.

[Whereupon, at 11:35 a.m., the committee recessed, to reconvene at 10 a.m., Tuesday, June 15, 1982.]

THE FUTURE OF MONETARY POLICY

TUESDAY, JUNE 15, 1982

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The committee met, pursuant to recess, at 10 a.m., in room 2359, Rayburn House Office Building, Hon. Henry S. Reuss (chairman of the committee) presiding.

Present: Representatives Reuss, Hamilton, Richmond, Brown, Heckler, and Wylie; and Senators Jepsen, Hawkins, and Kennedy.

Also present: James K. Galbraith, executive director; Charles H. Bradford, assistant director; and William R. Buechner, Chris Frenze, Mark R. Policinski, and Robert E. Weintraub, professional staff members.

OPENING STATEMENT OF REPRESENTATIVE REUSS, CHAIRMAN

Representative REUSS. Good morning. The Joint Economic Committee will be in order for a hearing which completes our series on monetary policy and what it is doing for and to this country, designed to lay the foundation for the Federal Reserve's statutory appearances before the House and Senate Banking Committees next month.

We welcome you, Chairman Volcker. You must be pleased at the congressional budget resolution which now lacks only a few days of final action. In your recent testimony before Congress, you have made it clear that a budget resolution appreciably diminishing the deficits that otherwise lay ahead was necessary and that it could be attained without mandating the repeal of the July 1, 1983, scheduled income tax cut. While I and most other Democrats believe that the forthcoming first budget resolution is unacceptably reactionary and unjust, all must recognize that it meets your two criteria—a meaningful deficit reduction attained without laying a glove on Kemp-Roth.

The budget resolution also contains the monetary directive requesting the Federal Reserve, in the light of deficit reductions, to reevaluate its monetary target ranges to reflect the economy's needs. Specifically, we in the Congress are concerned about the Federal Reserve's 1982 M_1 target ranges of 2.5 to 5.5 percent. The Federal Reserve has been greatly exceeding this range—M_1 growth has been almost 7 percent this year. If it now attempts to bring its actual M_1 creation for the rest of 1982 within the range money will be too tight and interest rates excessive. If, on the other hand, the Federal Reserve chooses to flout its own targets, credibility will be lacking, the markets will be spooked, and interest rates will still be unacceptably high.

Accordingly, I would very much hope that at the July 1 meeting of the Open Market Committee, the Federal Reserve would reevaluate and adjust that 2.5- to 5.5-percent monetary corset. Get out of the corset, Congress says, but, once you are freed from the corset your course lies in your own sound discretion.

I have been asked repeatedly recently what I would do if I were a member of the Open Market Committee, once we had announced that we were freeing ourselves from the corset. For whatever it is worth—and let me make it clear that I am presenting solely my own views—here is what I would think would be a serviceable Open Market Committee decision for July 1 which would be entirely consistent with the congressional intent.

I'd like to have the Federal Open Market Committee issue a statement along somewhat the following lines:

> The Federal Open Market Committee herewith announces a revised target range for the growth rate of M_1 for the second half of 1982. The range of growth for M_1, previously set at 2.5 to 5.5 percent, shall be 2.5 to 7.5 percent at an annual rate for the period of July 1, 1982 through December 31, 1982. The base from which the new target range is calculated shall be the level of M_1 on July 1, 1982.
>
> The Open Market Committee will continue to monitor congressional action on the budget as well as economic conditions, and will make further revisions of the monetary targets should further progress toward fiscal responsibility permit or should market conditions require.

In your statement, Chairman Volcker, I'm delighted to see that you mention the upcoming July 1 meeting of the Open Market Committee and that you say—and here I'm quoting:

> I do believe that you can assume that the decisions that do emerge from this review will reflect our continued commitment to disciplined monetary policy in the interest of sustaining progress toward price stability and, not incidentally, of encouraging a financial climate conducive to achieving and sustaining lower interest rates.

I will be very interested in hearing your views on the proposition I've put to you, but from the language you set forth in your statement I'm very hopeful that you will find yourself in agreement with me. If you do, I think the markets would take heart and we would have a very much better economic situation almost immediately.

Congressman Brown, congratulations on recent events in yours and Congressman Wylie's State. We're delighted that you're with us.

OPENING STATEMENT OF REPRESENTATIVE BROWN

Representative BROWN. Thank you, Mr. Chairman. I'm delighted to have an opportunity to be at this hearing, since I apparently was the instigator of it to some extent. Also, I want to ask certain specific questions of Mr. Volcker about the ability of the Federal Reserve Board to have any control over the money supply.

Chairman Volcker, the past few years have been a turbulent period for Federal economic policy. The 1981 Economic Recovery Tax Act marked a basic change in how we tax our citizens. The Congress, for its part, has gone through almost constant debate over the budget, and the outcome of that debate is still not certain even though we are now in conference on the first concurrent resolution. Monetary policy, which usually is allowed to exist inconspicuously, also has been a very public part of our economic policy turmoil.

No doubt this heightened interest by the public toward monetary policy is due to the high interest rates of the past 3 years. And because interest rates have moved downward only slowly during the recession, monetary policy has moved front and center in the economic debate.

To be blunt, the public is not convinced the Federal Reserve knows what it is doing or can do what it says it wants to. Some Members of Congress think the Fed knows what it is doing, but it is doing the wrong thing. Other Members of Congress, together with a growing number of analysts, are questioning whether the Fed can actually control monetary policy to a relevant degree. I must say I'm beginning to have that suspicion myself.

Such suspicions boil down to three questions. First, the money tenet of supply-side economics calls for a gradual reduction in the rate of increase in the money supply: A smoother, predictable lessening of inflationary money creation. In this regard, let me call your attention to a chart that I've had prepared. It's the first one over here. The chart shows that the Fed has been unable to deliver on this gradual reduction and has given us, if you will, boom and bust money growth. The question is, Can you provide less volatility in M_1's growth such that markets will be convinced the Fed will not attempt to print our way out of recession? Can you do this with present techniques or would you have to change your methods such as changing the lagging of reserve requirements?

Second, it is widely accepted that interest rates follow inflation relatively closely. From 1969 to 1979, the spread between the inflation rate and the interest rate was roughly 1½ to 2½ percent, as is shown in this chart. The difference between the yearly averages of the prime rate and the GNP deflator inflation rate averaged 1.96 percent for these years. Last year the difference was 9.77 percent. For the first quarter of this year, the gap was 13 percent. The same holds for long rates. The 10-year Treasury rate was, on average, 1.57 percent different from the deflator from 1969 to 1979, but last year the difference was about 5 percent. In the first quarter in this year, the gap was 10.8 percent. The question is, Why has this enormous gap developed? Is it that the Fed is too tight? Is it that the markets fear that the Fed will try to inflate our way out of the recession and are, therefore, not dropping the rates? Does the aforementioned volatility in M_1 growth breed uncertainty in markets and cause interest rates to be sluggish in responding to declining inflation? Why have interest rates fallen slowly even though inflation, by every measure, has decreased dramatically?

Finally, some suggest that the Fed cannot control M_1 sufficiently and therefore that M_1 is not the money aggregate to watch. There are many who want M_2 to be the gage of monetary policy because it includes M_1 and money market funds and therefore is less volatile due to shifts between the two. Others believe that the monetary base is the measure we should watch because it is the raw material from which all M's are created and can be more easily controlled by the Fed. So the third question is, Is M_1 a proper guide for monetary policy or should we find some alternative?

How the Fed answers these questions will have a great deal to do with how the Fed is perceived by the public. This perception has great political importance because, as you are very well aware, while the Fed's independence is cherished by most men of reason, a few might use these tumultuous times to extend the power of the Federal Government, either the administrative branch or the Congress, over the Fed. I certainly hope that the Fed's independence is kept intact just as much as I hope that the Fed will use its recently achieved prominence to provide the public with a clearer description of Federal Reserve policy and possibly better methods to carry out that policy. It's my hope that you are successful in doing what's right and good for the country, but I'm not sure that you can be and I am concerned about the problem.

I want to present just three other charts briefly for your consideration. If one looks at 1978–79, periods of very high inflation—that is, the trend rate of inflation was very sharply upward—the growth of M_1 over the previous 3 months was fairly stable. In 1980, 1981, and 1982, a period that comports to your service as chairman of the Fed, they were fairly unstable, and this was taken on a 3-month average. The instability still shows up over a 6-months average, and even if one takes the 1-year average, the swings have been fairly abrupt since 1979.

Thank you, Mr. Chairman.

Representative Reuss. Thank you, Congressman Brown.

Senator Jepsen and Senator Hawkins also have opening statements and under the rule and without objection they will be received in full into the record.

[The opening statements of Hon. Roger W. Jepsen and Hon. Paula Hawkins follow:]

Opening Statement of Senator Jepsen

Chairman Volcker, it is good as always to see you, and I look forward to hearing your testimony. However, first I want to let you know where I stand on "the future of monetary policy."

As you know, section 9 of Senate Concurrent Resolution 92, the first concurrent resolution on the fiscal year 1983 budget, expresses the sense of the Senate that "the Federal Reserve Open Market Committee shall reevaluate its monetary targets in order to assure that they are fully complementary to a new and more restrained fiscal policy." The budget resolution that passed the House contains the same language. In this regard, I want to put myself on record in support of the target ranges for growth in the monetary and credit aggregates that are now in place for 1982. These targets are appropriate.

Some believe that the target ranges should be increased, especially the M_1 target range, or else interest rates will remain high and stifle economic recovery from the present recession. I believe that the record shows that exactly the opposite will occur; that faster money growth will produce higher interests rates. For example, the bellwether 3-month Treasury bill rate increased from 4.4 percent in December 1976 to 15.7 percent in December 1980. That terrible rise occurred in association with yearly growth in the M_1 measure of money that averaged nearly 8 percent in the 1977 to 1980 period. You have to go back to World War II to find money growing faster than that for a period longer than a year.

The link between fast money growth and high interest rates is inflation. It takes a year or so for fast money growth to register in higher inflation, but in time it happens, for sure.

Inflation had been slowed to less than 5 percent per year by relatively slow money growth in the 1974 to 1976 period. Fast money growth in the 1977 to 1980 period rekindled it. And as inflation increased, interest rates soared—in the case of the 3-month Treasury bill rate—from 4.4 percent in December 1976 to 6.1 percent a year later, 9.1 percent the following December, 12.1 percent in December 1976, and 15.7 percent in December 1980.

Last year, 1981, you and your colleagues held M_1 growth to 5.0 percent. And last year the long, terrible climb in interest rates ended. The 3-month Treasury bill rate is now about 12.0 percent, down nearly 4 percentage points from the December 1980 level and over 4 percentage points from the May 1981 peak of 16.3 percent. Long-term interest rates have also topped out. They are lower today than they were in September 1981.

It would be a tragic error to reflate now. The building blocks for recovery—lower inflation, adequate money growth, lower interest rates, and reduced tax burdens—are in place. And there are clear signs that the recovery has started—retail sales rose in April and again in May, employment increased by nearly 800,000 after seasonal adjustment in May, excess inventories have been liquidated. I urge you as strongly as I can to reject counsel to reaccelerate money growth. That policy will rekindle inflation, which has been reduced significantly. And it will send interest rates climbing once again.

Congress is going to bring the budget into closer balance. I believe that this will "automatically," as Senator Proxmire has said, "result in a less restrictive monetary policy"—i.e., in lower interest rates. Action on your part to raise the target ranges for growth in the monetary and credit aggregates is neither necessary nor desirable.

I welcome you, Chairman Volcker. I am anxious to hear your views.

OPENING STATEMENT OF SENATOR HAWKINS

I welcome Chairman Volcker to this important hearing in these turbulent economic times. Some are questioning whether the Federal Reserve has the tools, the ability, or the political sensitivity to put our monetary policy on a steady, sound course that will give us solid, noninflationary economic growth.

I share that broad concern, but my concerns today are very specific. They relate to the financing, the administration, and the independence of the Federal Reserve System.

First, unlike virtually every other Federal operation, the Federal Reserve determines its own budget, without congressional oversight. It takes off the top from interest income on its securities portfolio and its discount operations what it believes is necessary to operate, and then refunds the balance to the Treasury. The Fed is not subject to an annual congressional authorization and appropriation process. While Federal Reserve Governors testify frequently before congressional committees, there is very little congressional oversight of its operations. I don't think it's a healthy situation for such an important agency, wielding such significant influence over the economy, to have capricious freedom to spend without checks or balances from Congress.

Second, I am concerned about the makeup of the Board of Governors. Five of the present seven Governors were previous employees or officials of the Federal Reserve System. Such inbreeding thwarts new ideas. I think there should be a limit of one Board member who had previously been associated with the Federal Reserve System.

Mr. Martin knows the savings and loan business, and Mr. Rice knows the banking business. But there are still no home builders, no realtors, no automobile manufacturers, no producers of capital equipment or consumer durables, nor other business or labor leaders from interest-sensitive sectors of the economy on the Board of Governors.

The Board should be made up of a more democratic representation, particularly concerning the impact the Board has on businesses and consumers.

Finally, I think it is important for the Federal Reserve to be responsive to the wishes of the administration in power. I am not suggesting that the Fed be stripped of its independence, but if the Board term of office was reduced to, say, 5 years, instead of the current 14 years, any President would be able to appoint several members to the Board who could work in harmony with the administration. Furthermore, I believe the Chairman and Vice Chairman of the Board should serve at the pleasure of the President.

I will want to get into these and other issues during the question and answer period, but I want you to think about them, Mr. Volcker.

Representative REUSS. If there are no other opening remarks, Mr. Volcker, we appreciate your statement which will be included in full in the record and would you now proceed.

STATEMENT OF HON. PAUL A. VOLCKER, CHAIRMAN, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

Mr. VOLCKER. Mr. Chairman, I do have a statement that is, as you indicated, a little difficult to summarize.

Representative REUSS. Don't hesitate to read it.

Mr. VOLCKER. I will read it then.

I am pleased to appear before this committee to discuss the conduct of monetary policy. In particular, I would like to focus on the monetary aggregates targeting framework in light of recent experience.

The Federal Reserve began reporting to the Congress specific numerical "targets" for the growth of the monetary aggregates in 1975. You will recall Congress had urged such an approach in House Concurrent Resolution 133. Subsequently, the reporting of growth targets for the aggregates was formalized in law with the enactment of the Full Employment and Balanced Growth Act of 1978, commonly referred to as the Humphrey-Hawkins Act. That law requires the Federal Reserve to present annual targets for monetary and credit aggregates to the Congress each February, and to review those targets and formulate tentative objectives for the coming calendar year each July. The choice of the appropriate measures to "target," as well as the quantitative expression of those targets, are, of course, a matter for the Federal Reserve to decide.

The development of this formal reporting framework, focusing on the growth of certain monetary and credit variables, was a reflection in part of the changes in attitudes toward monetary policy that occurred in the 1970's, and in part of a desire to improve communications and reporting about our intentions and policies. The worsening inflation problem focused increased attention on the critical linkage over the longer run between money growth and prices. There was a growing sense among some that earlier "conventional" views of a tradeoff between inflation and growth were no longer compatible with actuality, at least over the medium and longer run, and that inflation had emerged as a major economic problem. A number, including some Members of Congress, placed increased emphasis on restraining growth of the monetary aggregates over time as a means of dealing with inflation, and urged establishing our intentions in that respect over a longer period of time ahead. More generally, aggregate targeting was thought to provide the Congress with a more clearly observable measure of performance against intentions, which in turn implied that targets should not be changed frequently, or without clear justification.

The formulation of specific monetary aggregates targets also has been consistent with the goals and approach of the Federal Reserve. A basic premise of monetary policy is that inflation cannot persist without excessive monetary growth, and it is our view that appropriately restrained growth of money and credit over the longer run is critical to achieving the ultimate objectives of reasonably stable prices and sustainable economic growth. While other policies must be brought to bear as well, the specific annual targets announced periodically by the Federal Reserve have reflected efforts to reconcile and support these goals.

It seems to me implicit in an aggregate targeting approach, as urged by the Congress, that interest rates in themselves are not the dominant immediate objective or focus in assessing the posture of monetary policy, even though that remains the instinct of many. Interest rates are, of course, highly important economic variables, and they are intimately involved in the process by which the supply of money and other liquid assets are reconciled in the market with the demands for liquidity derived from the growth of the economy, inflation, and other factors. But interest rates are also importantly influenced by other forces as well, including expectations about inflation, about future interest rates, the budgetary posture, and other factors. The experience of the seventies emphasized some of the pitfalls and shortcomings of using interest rates as a guide for policy, particularly in an environment of generally rapid and rising inflation and correspondingly uncertain price expectations. In those circumstances, it is especially difficult to gauge the stimulative or restrictive influence associated with a given level of nominal interest rates. Recognition of these difficulties was an important element in the decision by the Federal Reserve to adopt procedures in October 1979 that placed emphasis, even in the shorter run, on the supply of reserves rather than primarily on short-term interest rates as operational guides toward achieving an appropriate degree of monetary control.

While all these considerations have suggested the use of the framework of monetary aggregates targeting, we need also to be conscious of the fact that the world as it is requires elements of judgment, interpretation, and flexibility in judging developments in money and credit and in setting appropriate targets. One reason for that is the impact of financial innovations on the growth of particular measures of money and the relationships among them. In recent years, generally high and variable interest rates, and the continuing process of technological change and the deregulation of depository institutions, have provided powerful stimulus for far-reaching changes in the financial system. The proliferation of new financial instruments and the development of increasingly sophisticated cash management techniques have created a need to adjust the definitions of the monetary aggregates from time to time and to reassess the relationship of the various measures to one another and to other economic variables. A somewhat separable matter conceptually—but in practice hard to distinguish—is that businesses or families may shift their preferences among various financial assets in a manner that may alter the economic significance of particular changes in any given measure of "money" or "credit."

Use of monetary targeting procedures is justified on the presumption that "velocity"—that is, the ratio between a given measure of money and the nominal GNP—is reasonably predictable over relevant periods. At the same time, it can be readily observed that, in the short run of a quarter or two, velocity is highly variable. Those short-run deviations from trend need to be assessed cautiously, for they commonly are reversed over a period of time.

However, we cannot always assume a rigid relationship between money and the economy that, in fact, may not exist over a cycle or over longer periods of time, especially when technology, interest rates, and expectations are changing. Consequently, it is appropriate that the Federal Open Market Committee reconsider, on a continuing basis, both the appropriateness of its annual targets and the implications of shorter run deviations of actual changes from the targeted track.

The introduction of NOW accounts nationwide last year was illustrative of some of the difficulties arising from a changing financial structure. To some degree, the Federal Reserve was able to anticipate the impact. It was obvious, for example, that the rapid spread of NOW accounts, by drawing some money from savings accounts as well as demand deposits, would have important effects on the M_1 aggregate, and last year's targets allowed for such effects. However, after accounting for these shifts into NOW accounts, the growth of the several aggregates was considerably more divergent than was anticipated, with M_1 running relatively low while the increase in some of the broader aggregates was a bit above their annual objectives. Taking into account all of the financial innovations affecting the aggregates—particularly the depressing effects on M_1 of extraordinarily rapid growth in money market mutual funds—and the relatively rapid growth of M_2 and M_3, we found the pattern of slow growth in M_1 acceptable. Indeed, last year's experience seems to me a clear illustration of the need to consider a variety of money measures, rather than focusing exclusively on a single aggregate such as M_1.

Thus far this year, the monetary aggregates have behaved more consistently, although M_1 is running a bit stronger than anticipated relative to the other aggregates. With the major shift into NOW accounts, in terms of new accounts opened, mostly behind us, one source of distortion has been removed from the data. But I would also note that, as result of that "structural" shift, NOW accounts and other interest-paying checkable deposits have grown to be almost 20 percent of M_1, and there is evidence that the cyclical behavior of M_1 has been affected to some extent by this change in composition.

While M_1 is meant to be a measure of transactions balances, NOW accounts also have some characteristics of a savings account (including similar "ceiling" interest rates). This year there has been a noticeable increase in the public's desire to hold a portion of their saving in highly liquid forms, probably reflecting recession uncertainties. As a result, NOW accounts have grown particularly fast, accounting for the great bulk of the growth in M_1, and at the same time the rapid decline in savings deposits has ceased. Overall, M_1 growth so far this year has been somewhat more rapid than a "straight line" path toward the annual target would imply. To the extent the relatively strong demand for M_1 reflects transitory precautionary motives, allowing some additional growth of money over this period has been consistent with our general policy intentions.

In arriving at such a judgment, the pattern of growth in the broader aggregates should be considered. There also have been important institutional changes in recent years affecting the behavior of M_2 and M_3. For example, an increasingly large share of the components of M_2 that are not also included in M_1 pay market-determined interest rates. This reflects the spectacular growth of money market funds in recent years as well as the increasing availability at banks and thrift institutions of small-denomination time deposits with interest rate ceilings tied to market yields. An important consequence is that cyclical or other changes in the general level of interest rates do not have as strong an influence on the growth of M_2 as in the past.

The broader aggregates are presently at or just above the upper end of the ranges of growth set forth for the year as a whole. In February, we reported to the Congress that M_2 and M_3 would appropriately be in the upper half of their ranges, or at or even slightly above the upper end, should regulatory changes and the possibility of stronger savings flows prove to be important. In that regard, I must point out we have yet to go through a full financial cycle with such a large money fund industry or with the regulatory and legal changes recently introduced. In these circumstances, it is clear that interpreting the performance of the monetary and credit aggregates must be assessed against the background of economic and financial developments generally—including the course of and prospects for business activity and prices, patterns of financing, and liquidity in various sectors, the international scene, and interest rates. It is in that broader context that we have not believed that the growth of the various M's has been unduly large so far this year.

The point I am making is that a large number of factors have impinged—and in all likelihood will continue to impinge—on the growth of the monetary aggregates, possibly in the process modifying the relationship of any particular measure of "money" to economic peformance. The relationships have been good enough over a period of time to justify a presumption of stability—but I do believe we must also take into account a wide range of financial and nonfinancial information when assessing whether the growth of the aggregates is consistent with the policy intentions of the Federal Reserve. The hard truth is that there inevitably is a critical need for judgment in the conduct of monetary policy.

Looking back at the last few years, money growth has certainly fluctuated rather sharply from time to time in the United States (and, I might note, in other countries as well). As I earlier noted, relationships have also been affected by a variety of financial innovations. But the trend over reasonable spans of time has generally been consistent with the announced targets of the Federal Reserve, and the restrained growth has, in my judgment, contributed importantly to the now clear progress toward reducing inflation. This longer run and broader perspective is what should be kept in mind when considering growth in the aggregates. The tentative decision, not yet implemented, to publish the M_1 data in the form of 4-week moving averages is designed to divert undue attention from the statistical "noise" in the weekly movements in M_1 and to encourage knowledgeable observers to focus on broader trends in the whole family of aggregates.

One obvious frustration in the current circumstances is that interest rates, particularly longer term rates, still are painfully high despite the protracted weakness in the real economy and a marked deceleration in the measured rate of inflation. With the unemployment rate currently at a new postwar high, there is an understandable inclination to want to get interest rates down quickly to encourage a rebound in activity.

Nothing would please me more than for interest rates to decline, and the progress we are making on inflation, as it is sustained, should powerfully work in that direction. But, I also know that it would be shortsighted for the Federal Reserve to abandon a strong sense of discipline in monetary policy in an attempt to bring down interest rates. It may be that the immediate effect of encouraging faster growth in the aggregates would be lower interest rates—particularly in short term markets. But over time, the more important influence on interest rates—particularly longer term interest rates—is the climate of expectations about the economy and inflation, and the balance of savings and investment. In that context, an effort to drive interest rates lower by money creation in excess of longer run needs and intentions would ultimately fail in its purpose and would threaten to perpetuate policy difficulties and dilemmas of the past.

When long-term interest rates decline decisively, it will be an indication of an important change in attitudes about the prospects for the economy. One essential element in this process must be a widespread conviction that inflation will be contained over the long run. The decline in inflation evident in all of the broadly based price indexes over the past year is highly encouraging. For example, in the 12-month period ending in April, the CPI rose 6½ percent compared to 10 percent over the previous 12 months. Over the past few months, the CPI has been virtually stable.

But it is also evident that some particular elements accounting for the sharp reduction in inflation are not sustainable; they have been achieved in a period of recession and slack markets, and have reflected some sizable declines in energy prices that now appear behind us. Progress toward reducing the underlying trend in costs, while real, has been slower. We have seen some polls that suggest many Americans do not in fact appreciate that inflation has slowed at all. That impression is plainly contrary to fact. But it is perhaps indicative of how deep-seated impressions and expectations of inflation had become by the late 1970's, and it is suggestive of the concern of renewed higher inflation rates as economic activity recovers. No doubt those concerns continue to affect investment judgments and interest rates.

In this situation, one key policy objective must be to build in what has so far been a partly cyclical decline in inflation, to encourage further reductions in the rate of increase in nominal costs and wages, and then to establish clearly a trend toward price stability. That approach seems to me essential to encourage and sustain lower long-term interest rates, which will, in turn, be important in sustaining economic growth.

While monetary policy is only one of the instruments that can be brought to bear in restoring price stability, it is both necessary to that effort and widely recognized to be such. These circumstances emphasize the need to avoid excessive monetary growth, with the threat it would bring that the heartening progress against inflation would prove only temporary.

I think that it also is quite clear that the prospect of huge and rising budget deficits as the economy recovers has been another element in the current situation raising concerns about long-term pressures on interest rates. I take encouragement from the efforts of the House and Senate to begin to come to grips with this problem. At the same time, we are all aware of how much remains to be done, not only to reach agreement on a budget resolution for fiscal 1983, but to take the action necessary to implement such a resolution in appropriation and revenue legislation. Moreover, as you well know, further legislation will be needed beyond that affecting fiscal 1983 to assure elements in the structural deficit are brought more firmly under control.

Let me emphasize that a strong program of credible budget restraint will itself work in the direction of lower interest rates.

The perception that future credit demands by the Federal Government would be lower would reinforce the emerging expectations of less inflation. The threat that huge deficits would preempt the bulk of the net savings the economy seems likely to generate in the years ahead—with the likely consequence of exceptionally high real interest rates continuing—would be dissipated. Confidence would be enhanced that monetary policy will be able to maintain a noninflationary course, without squeezing of homebuilding, business investment, and other interest-sensitive sectors of the economy, and without excessive financial strains in the economy generally. And by dealing with very real concerns about the future financial environment, budgetary action would be an important support to the recovery today.

In summary, casting monetary policy objectives in terms of the aggregates has been a useful discipline and also has been helpful in communicating to Congress, the markets, and the general public the intent and results of the Federal Reserve actions. At the same time, we must retain some element of caution in their interpretation; the monetary targets convey a sense of simplicity that may not always be justified in a complex economic and financial environment. There is far from universal appreciation of the fact that the economic significance of particular aggregates is constantly evolving in response to rapid changes in financial markets and practices. Consequently, the Federal Reserve is continually faced with difficult judgments about the implications for the economy.

As you know, the Federal Open Market Committee soon will be meeting to review the annual targets for the monetary aggregates for 1982 and to formulate tentative targets for 1983. I would not presume to anticipate the precise decisions that will be made by the committee. A wide array of financial and nonfinancial information will be reviewed in the process of considering the specific objectives. And, while I do not anticipate any significant change in our operating procedures in the near term, we will also continue to assess and reassess the means by which our policies are implemented. However, I do believe that you can assume that the decisions that do emerge from this review will reflect our continued commitment to disciplined monetary policy in the interest of sustaining progress toward price stability—and, not incidentally, of encouraging a financial climate conducive to achieving and sustaining lower interest rates.

We can not yet claim victory against inflation, in fact or in public attitudes. But I do sense substantial progress—and a clear opportunity to reverse the debilitating pattern of growing inflation, slowing productivity, and rising unemployment of the 1970's. The challenge is to make this recession not another wasted, painful episode, but a transition to a sustained improvement in the economic environment.

Central to that effort is an appropriate course for fiscal and monetary policy—a course appropriate, and seen to be appropriate, for the years ahead. Critical elements in that effort are the commitments to gain control of the Federal budget and to maintain appropriate monetary restraint. Those policies provide the best—indeed the only real—assurance that financial market conditions will be conducive to a sustained period of economic growth and rising employment and productivity. In the long years to come, we want to look back to our present circumstances and know that the pain and uncertainty of today have, in fact, been a turning point to something much better.

Representative REUSS. Thank you very much, Chairman Volcker.

Senator Jepsen, your opening statement was placed in the record earlier, but I'd like to have you present it if you care to.

Senator JEPSEN. Thank you, Mr. Chairman. I will be very brief. I just want to make sure the record does show the link between fast money growth and high interest rates. The Governor has indicated it takes a year or so for fast money growth to be reflected by higher inflation. But in time it happens for sure.

The facts are that inflation had been slowed to less than 5 percent per year by a relatively slow money growth in the 1974 to 1976 period. Fast money growth in the 1977-80 period rekindled it. These are the facts. As inflation increased, interest rates soared. In the case of the 3-month Treasury bill rate, it went from 4.4 percent in December 1976 to 6.1 percent a year later; 9.1 percent the following December, and 12.1 percent in December 1979, and 15.7 percent in December 1980.

Last year, 1981, you and your colleagues held M_1 growth to about 5 percent. And last year the long, terrible climb in interest rates ended. The 3-month Treasury bill rate is now about 12 percent, down nearly 4 percentage points from the December 1980 level and over 4 percentage points from the May 1981 peak of 16.3 percent. Long-term interest rates have also topped out. They are lower today than they were in September 1981.

So, I do believe that it would be a tragic error to reflate now. The building blocks for recovery—lower inflation, adequate money growth, lower interest rates, and reduced tax burdens—are in place. And there are clear signs that the recovery has started. Retail sales rose in April and again in May, employment increased by nearly 800,000 after seasonal adjustment in May, excess inventories have been liquidated. So, I urge you as strongly as I can to reject counsel to reaccelerate money growth. That policy will rekindle inflation, which has been reduced significantly, and will send interest rates climbing once again.

Congress, I believe, is going to bring the budget into closer balance, and I believe that this will automatically, as Senator Proxmire has said, result in a less restrictive monetary policy—that is, in lower interest rates. Action on your part to raise the target ranges for growth in the monetary and credit aggregates is neither necessary nor desirable. And I would hope and trust that you continue to hold firm and not yield to recommendations that you change your stance. We do know that the terrible rise in interest rates in the summer occurred in association with the yearly growth in the M_1 measure of money that averaged nearly 8 percent in the years 1977–80. We have to go back to World War II to find money growing faster than that for a period longer than a year and we're suffering yet from those 3 years of a nearly 8-percent growth in money. So, hang in there.

Representative REUSS. Thank you very much, Senator Jepsen.

We will now inquire under the 10-minute rule.

REEVALUATION OF THE 5.5-PERCENT CEILING

Chairman Volcker, you've come down strongly against excessive money creation. We're all against that. The question is, What should be done about your present 5.5-percent M_1 target ceiling on which I expressed myself at some length earlier?

I'll ask you a simple question. Is your mind closed against action by the Open Market Committee at its July 1 meeting to reevaluate and adjust that 5.5-percent ceiling which in my view is responsible for so much misery in this country today?

Mr. VOLCKER. No. We can, of course, reevaluate these ceilings at any meeting, and the semiannual meetings are, by law, specifically directed toward such a reexamination. I think it would be inappropriate, in embarking upon this kind of reevaluation, to say that one's mind is absolutely closed. Of course, these decisions are up to the committee as a whole, not to me; but I think we normally reevaluate these targets with some care at the semiannual meetings.

ARE ANY FINANCIAL INSTITUTIONS IN PERIL?

Representative REUSS. I shall inquire no further. The next subject has to do with the predictions that some are making that in view of the wretched state of our economic and financial arrangements that there could lie ahead real distress for certain large financial institutions—banks or brokerages. Do you see any peril of that ahead and, if there is, what would you propose to do about it?

Mr. VOLCKER. Let me answer that question in general terms, Mr. Chairman. You refer to the "wretched" state of the economy, and in an immediate sense, one can recognize that description.

Representative REUSS. 10 million unemployed is my wretchedness index.

Mr. VOLCKER. Exactly; there's a high level of unemployment. But let me emphasize, too, that I think this could be a promising period. We are now at the culmination, as I see it, of a deteriorating economic performance that's extended over a decade or more. I think that's been tied to a lot of factors, among them inflation. I think we can see some clear signs of progress on the inflation front, and if we can come out of this present, very difficult, circumstance with a sound base for expansion and sustained expansion, we will have converted a "wretched" period, if you will, into a foundation for something much better in the future. I think we have to keep our eye on that objective, and I just want to put it in that perspective.

Part of this problem that we have at present is that, in some sectors of the economy—and a good many of the sectors of the economy—there are strong financial pressures. There were trends at work over a period of time that I think were unsustainable. We've come to the point where some of those trends have to be changed. The liquidity in American corporate business, for instance, has been declining over a considerable period of time, and it has reached the position where many companies are indeed strained.

I don't think you can get out of that situation without dealing with some of its fundamental causes, and that comes back to the inflationary problem. I don't want to deny that some strains exist, but I don't think they need to be crippling in terms of the transition of which I spoke.

WHAT WILL THE FED DO IF A MAJOR BANK FAILS?

Representative REUSS. My question was, Is there a peril of going broke confronting a large bank or other financial institution, and if there is, what do you propose to do about it?

Mr. VOLCKER. We have a lot of thrift institutions that are certainly in peril, have been in peril, and will continue to be in peril. I think we have adequate kinds of instruments—a safety net if you will—that enable us to deal with this situation. It's not a happy situation, to say the least, but I don't think it's a situation that has to jeopardize the whole economy.

Representative REUSS. What are the elements of that safety net?

Mr. VOLCKER. We have the basic deposit insurance system and the lender of last resort function, which are in place. In its precise implementation, as you know, there have been a good many mergers sponsored officially, with support for the surviving institutions.

The Congress has been working on two pieces of legislation that would help in dealing with this situation: Capital infusion legislation and legislation to facilitate mergers in distressed cases across State lines if necessary.

SHOULD THE FED CONTROL CREDIT GROWTH AS WELL AS MONEY GROWTH?

Representative REUSS. Let me call your attention now to your statement where you say that, "It is our view that appropriately restrained growth of money and credit over the longer run is critical." Some might say that you have been concerned with restraining the growth of money sure enough, but what have you done about credit? Isn't it a fact that you've let credit run hog-wild without any particular restraint?

Mr. VOLCKER. No.

Representative REUSS. Tell us what you've done about credit.

Mr. VOLCKER. I don't agree with that at all. We have restrained credit with the same general tools with which we restrain money. As you look at the broader monetary aggregates in particular, I think you have to recognize you're looking, essentially, at the other side of the balance sheet; you're looking at something that approaches the same totals, but you're looking at it from the liability side of the balance sheet from the standpoint of the financial institution, rather than the asset side that you look at if you look at credit directly.

We could argue which measure is most informative, which is most useful in an expository sort of way as a method of communication, but I think that in controlling the broad, and being influenced by, the broad monetary aggregates, we're also looking at a very large portion of the credit side of the economy.

Representative REUSS. How do you control corporate commercial paper?

Mr. VOLCKER. We don't control the individual components, except as they are affected by the general financial climate, the general economic climate. It's quite true we do not control particular sectors of credit.

Representative REUSS. You do control money.

Mr. VOLCKER. But not particular sectors of money either.

Representative REUSS. Don't you—M_1, M_2, M_3,?

Mr. VOLCKER. We don't have any differential control over M_1 from what we have over M_2 or M_3. The measures may be affected in different ways by a particular action, but we don't have an instrument that affects M_1 without affecting M_2, or vice versa. Our instruments are very general instruments.

Representative REUSS. But you have targets.

Mr. VOLCKER. We have targets, that's right.

Representative REUSS. And do you have targets for credit?

Mr. VOLCKER. We have one subsidiary target for a portion of credit—bank credit.

Representative REUSS. But that's just a small part of the whole.

Mr. VOLCKER. That is only part of the whole, that is correct.

SHOULD THE FED CONTROL NONBANK AS WELL AS BANK CREDIT?

Representative REUSS. Have you ever thought that a comprehensive job by the central bank ought to encompass some concern over nonbank credit?

Mr. VOLCKER. I don't think there's any question about the concern; the question is whether it's useful to add that as another target aggregate in an explicit way. We look at those numbers; we follow them; we try to understand them. It's a question of whether it is useful to add that as another target variable. We've look at that question from time to time. I think it's fair to say that the conclusion, in general, has been that if you take a broad credit aggregate you are not adding very much beyond what we already have in terms of the broad monetary aggregates or the broad liquidity aggregates, for the reason I mentioned earlier—it's just a different side of the same balance sheet.

It can well be argued it is a significant economic variable. It's a matter of preference as to which side of the balance sheet you look at.

DISPARITY BETWEEN CREDIT AND M_1 GROWTH RATES

Representative REUSS. In 1981, for instance, M_1 grew 2.3 percent; credit grew a total of 11.1 percent. It's quite a disparity.

Mr. VOLCKER. You will get a difference between M_1 and total credit. That difference will be much less between M_2 and M_3 and total credit, because you've got broader aggregates that are more comparable to the breadth of the credit aggregate that you're looking at on total credit.

Representative REUSS. But aren't you straining at the gnat of M_1, keeping it in 1981 down to 2.2 percent and swallowing the camel of hyped up credit expansion?

Mr. VOLCKER. I would, I think, answer that question somewhat differently. We do not look at M_1 alone—and this gets to one of Representative Brown's questions. I think to have some sense of what's going on in the financial markets, what's going on with respect to monetary policy, what's going on with respect to credit to be sure, one has to have a horizon that extends beyond M_1, and we tend to look at this whole family of aggregates.

You could add another, but I don't think it's going to add a huge amount of new information, although conceptually I'm not disturbed by that possibility. One of the problems with the credit aggregates is that you simply don't have up-to-date information when the aggregate gets very broad, so you can't look at it in the same way—on a current month or last month basis—simply because you don't have the information.

Representative REUSS. Thank you, Chairman Volcker. My time is up.

Congressman Brown.

WHY HAVEN'T INTEREST RATES GONE DOWN?

Representative BROWN. I want to take my text also from St. Paul here. In your statement, you said a basic premise of monetary policy is that inflation cannot persist without excessive monetary growth, and then you go on to say that it is your view that an appropriate restrained growth of money and credit over the longer run is critical to achieving the ultimate objectives of reasonable and stable prices and sustainable economic growth.

Well, I would say that another basic premise of monetary policy is that real interest rates are about 3 percent; that is, normal interest rates are usually 3 percent above the inflation rate. And somehow we seem to be violating that premise currently.

The current GNP deflator for the first quarter is 3.5 percent. If you take only a 3-month average inflation rate, the rate of inflation currently is only about 1 percent on that 3-month average of the CPI.

Now I don't understand why they prime is at 16 percent and the longer term rates are somewhat lower but still have that big gap in there. In a recent issue of U.S. News & World Report, an intellectual news magazine, they throw in another 2 percent for the fear premium, that is to protect against a new outburst of inflation; and 2 percent for the volatility premium to protect against wild swings in rates—I refer back to the chart of the M_1 rates. And then a long-term risk premium to cover risk for lending beyond 10 years, and then they have an inflation premium covering approximate current annual rise in prices, and clear down at the bottom is the normal rate of return of 3 percent.

I don't know whether any of that makes any sense, but I guess what I'm looking for is a simple reason why interest rates have not yet come down. Can you address that?

Mr. VOLCKER. I don't know that I can give you a simple reason, because I don't think the problem is as simple as dividing it up statistically in the manner in which the U.S. News & World Report attempted to do. I think they may have mentioned some factors that enter into the level of interest rates, but it is extremely difficult to make a quantitative estimate.

FEAR OF RENEWED INFLATION

I don't think I can agree that it is or should be a basic premise of monetary policy that there be a particular real interest rate. History has been replete with fluctuations in real interest rates and, of course, a real interest rate is concepts and not statistics. What you really talk about when you talk about real interest rates is the level of interest rates against the level of expected inflation, and expected inflation is nothing you can get from a price series; it lies in people's minds. Particularly when you're talking about longer term interest rates that becomes more and more important.

If you talk about one factor accounting for what is certainly a relatively high level of nominal and, in my opinion, real interest rates at present, I think you can get some insight into the problem by thinking about a poll I saw recently and that you may have seen: It indicated that three-quarters of "typical" Americans don't seem to think inflation has come down at all.

Representative BROWN. But now let's both get on the record. It has come down and very sharply.

Mr. VOLCKER. As I said in my statement, I think the impression reflected in that poll is contrary to fact. But investment behavior and interest rate behavior are influenced by a state of mind. I would ask after going through literally 15 years of rising inflation, and having it pretty well engrained in the public's mind that inflation was here to stay and probably would rise—you and I can both remember the concerns about that only a couple of years ago—how quickly are people going to feel confident that that trend has been reversed, despite those very good figures that you and I cited? I think that is part of the problem, that you don't change that state of mind, if you will, very rapidly in response to even very good inflation figures.

I think it's fair to point out, as I allude to in my statement as well, that inflation figures represent what happened last month or 2 months ago or 3 months ago. The CPI and the wholesale price index do overstate the degree of progress that's been made, and I think there's some sense of that by the public—because it's true.

If you look at wage costs, for instance—still going up 8 or 9 percent a year, maybe 8 is closer—that suggests that the underlying inflation rate isn't as good as those figures. Now the challenge is to bring that down.

Representative BROWN. Let me say to you, sir, that you've got some examples of some labor unions—because of the difficulty out there, and I go back now to Mr. Reuss' point about the unemployment tragedy—negotiating reduced wage demands or at least reduced expectations for increase in their wage demands. You've got the businessman who may be looking at the building of a house that says:

> Well, better keep those guys working and have a very limited rate of return for my profit, rather than anticipate that I must cover an inflation rate of 10 or 12 percent a couple years ago.

Mr. VOLCKER. I have no doubt that things are changing in this respect, and they are changing in what seems to me a highly constructive, promising direction. I fully agree with that, and I don't want to minimize that; I think it's terribly important.

The only point that I was making is that the actual Consumer Price Index or wholesale price index of last month exaggerates the degree, the pace of that change. But it's there; it's real.

THE SLOW RESPONSE TO REDUCED INFLATION

Representative BROWN. I understand your argument that the expectations are there, but in a highly competitive society where somebody is out of work, where somebody is losing the opportunity for his business to function and have a chance to make money, why isn't he looking more naturally at making a reduced profit rather than making a profit that is going to cover his anticipation, if you will, of the inflation rate; and why is it that the interest rate is the one that has been the most resistant to that kind of change?

Mr. VOLCKER. I can't answer the first part of your question, because I sit here with a degree of frustration myself and ask why doesn't that process go faster; why don't people in effect take a chance that indeed the inflation rate will remain lower? It would make everything move better the quicker they respond to that new set of circumstances; and I think it is a new set of circumstances.

The fact is that people respond more slowly, and I think the explanation arises out of the history of the past 10 or 15 years.

We're still only discussing one factor entering in interest rates, but I think it's an important one for long-term rates. The past 10 or 15 years have been a very unfavorable climate for taking a chance on interest rates and taking a chance on the inflation rate. People haven't forgotten about that. Bond purchasers are very sensitive to those assumptions and to the reality. It's not surprising that you see some hesitancy, let me say, in that area.

Representative BROWN. Before my time is up, let me get to this question of volatility.

Mr. VOLCKER. And we've only been on one of the explanations, of course.

CAN THE FED ELIMINATE RECENT VOLATILITY OF MONEY GROWTH?

Representative BROWN. The question is simply this. Can the Federal Reserve, using present procedures, really control the money supply? If you can't, tell me what Congress can do to help you get control of it. If you can control the money supply, then why did we have all that volatility in M_1 that we've had in the last 2 or 3 years?

Mr. VOLCKER. We can control it over a period of time. With the present techniques we can control it more closely, probably, and in a shorter term than arises from using other techniques. But the question has to be extended beyond the mechanical question, in my judgment, as to whether you can do it. The question must get into elements of whether you should do it. What degree of short-term control of the money supply is necessary or desirable?

The money supply, in the short run, responds to our actions, our current actions and, more importantly, the actions that we took a few weeks or months ago. It also responds to instability, technically, on the demand side. There's a demand for money as well as a supply of money, and there is a real question as to how rigid one wants to hold the money supply when there's a fluctuation in demand.

Ideally, one would assess the causes, significance, quantity of the fluctuation in demand. That's very hard to distinguish in the real world, but the burden of part of my statement is that we think we see something of that phenomenon in the first half of this year.

Representative **Brown**. An increase in demand?

Mr. **Volcker**. An increase in demand arising, in this case particularly, out of what you might generally call the "NOW account phenomenon." We have a new instrument that has some of the characteristics of savings as well as of money. To the extent people have wanted to be more liquid—let's say primarily because of uncertainities about the economic situation—they have wanted to hold more money in that particular form where they get a little interest as they do in a savings account. You can see a sharp trend in the change in savings accounts as well as NOW accounts. Out of the total increase in the money supply since last October of about $20 billion—that's not an enormous figure given the total size of financial assets in the country—about $16 billion has been in NOW accounts. An item which accounts for only 20 percent of the money supply has accounted for three-quarters of the increase over that period.

You ask yourself why there is this seemingly peculiar distribution. Good old-fashioned demand deposits actually went down over this period. We don't think there's been a lot of shifting between the two. There is a precautionary premium in the market at the moment for holding a highly liquid asset. You see it not only in NOW accounts, you see it in savings deposits and in other types of assets.

In concept, we could offset all that and just push harder in restraining the growth of money. Would that have been a wise policy given the circumstances of economic activity, and the progress that's being made on inflation and all the rest? That's the kind of judgment that has to be made, and in effect, in analyzing the situation, in taking account of that peculiarity—if that's the right word—we decided that in effect we were restrictive enough.

Representative **Brown**. My question is not on the restriction, but rather on how you keep it from jumping up and down. I have a great deal of difficulty understanding what we might be able to do in this regard to help you or what you can do to help keep it from doing that. My time is up, and I can't pursue it further. I'd like to.

Mr. **Volcker**. I would like to, too, but——

Representative **Reuss**. Congressman Richmond.

Representative **Richmond** [presiding]. Thank you, Mr. Chairman. Congressman Hamilton.

WHAT WILL HAPPEN TO INTEREST RATES IN COMING MONTHS?

Representative HAMILTON. Thank you. Mr. Chairman, let me ask you the question I think most of my constituents would want to ask. What is going to happen to interest rates in the next few months?

VOLCKER REFUSES TO FORECAST INTEREST RATES; EXPLAINS WHY

Mr. VOLCKER. I refrain from making precise forecasts of interest rates, and I think I'd better stick to that approach.

Representative HAMILTON. You are the world's leading expert on American interest rates, Mr. Volcker, and they want to know what your prediction is.

Mr. VOLCKER. Maybe that's why I'm cautious about making predictions in the short run. But let me agree, I think these interest rates are——

Representative HAMILTON. They really are looking for some kind of guidance, some kind of direction.

Mr. VOLCKER. I think these interest rates are extraordinarily high.

Representative HAMILTON. I know that. I'm just trying to get your judgment as to what's going to happen to them in the next few months.

Mr. VOLCKER. I am not going to be pinned down to any particular time period. I discussed one factor with Congressman Brown earlier. You've got budgetary considerations and other considerations at work, too.

Representative HAMILTON. You have a budget resolution that is predictable now. You know what the deficit is for the House resolution. You know what the deficit is for the Senate resolution. You know that it is going to end up somewhere in between.

Mr. VOLCKER. I know the numbers on those resolutions. I welcome those resolutions, but I think we're some distance from having in place a firm budgetary picture. I think we're making progress; I'm encouraged; I don't criticize those resolutions at all. But, I'm sure you understand that we're a long way from a completed budget and there's some distance from that to a completed budgetary forecast. I think these interest rates are extraordinarily high. If, in the area of monetary policy and fiscal policy we do the right things, as I said before, I don't see any place for those interest rates to go but down.

Representative BROWN. But when?

Representative HAMILTON. When?

Mr. VOLCKER. I will not attempt to be more precise.

VOLCKER UNCERTAIN ABOUT ECONOMIC RECOVERY

Representative HAMILTON. All right.

I take it from your statement that what you are really saying to us is that you're not going to loosen money supply any. I gather you're not going to tighten it any, either. That is your frame of mind at the moment, is that right?

Mr. VOLCKER. Maybe that's a fair summary. I don't know what particular sentence you're referring to. I think the burden of much of my testimony is that it's awfully hard to measure. There's a kind of seductive simplicity to measure what's happening by last month's increase in some monetary aggregate or another. I don't think it's as simple as that, because it depends upon what the demand is as well as the supply.

We have to make some analysis of that. If we had, for instance, an economic recovery—it does appear to me that we are most likely in the process of a bottoming out at the moment and that we can look forward to some recovery, some restoration of confidence during the latter part of the year—then this liquidity phenomenon that I referred to may tend to wash out to some degree, and that would produce a slower rate of growth in the money supply statistically, but not a tighter policy.

Representative HAMILTON. It is your judgment that we are at the bottom of the recession now?

Mr. VOLCKER. I think that's likely, yes.

Representative HAMILTON. And you indicate in your statement that you think inflation will go up?

VOLCKER DISCUSSES THE OUTLOOK FOR INFLATION

Mr. VOLCKER. No. You have to look at two things. I think the underlying rate of inflation is on the way down, but I think it is quite possible—it's even probable—that some of these monthly wholesale price indexes and consumer price indexes are going to show some increases. For one thing, we have had some sizable declines in gasoline and other energy prices reflected in those figures. In today's market that's over, the gasoline prices are up some; those things haven't been captured in those statistics but will be in the next few months, so you could get some jagged movements in the Consumer Price Index.

I think the basic trend of inflation is clearly down. Let me distinguish between the underlying rate and those figures jumping around from month to month or even for a quarter—just like the money supply figure jumps around.

COMMENTS ON BIS CALL FOR LOWER U.S. INTEREST RATES

Representative HAMILTON. Your fellow central bankers, the Bank for International Settlements, issued a statement yesterday urging the United States to relax its tight monetary policy in order to lower interest rates.

What do you have to say in response to the judgment of your fellow world central bankers?

Mr. VOLCKER. You may be referring to an article in the New York Times.

Representative HAMILTON. I am.

Mr. VOLCKER. That caught my eye yesterday, so I went to see what they said. I have not seen the actual full report of the BIS. I have read the address of the president of the BIS, which conveys a quite different sense and tone than that article did. I can just quote from it:

> I must say at once that to relax anti-inflationary efforts now would be a serious mistake. Rather, the pressing need is to ensure that other elements of policy are

made more consistent with a disinflationary monetary stance. In that way, any further increase in unemployment might be kept to a minimum.

He's referring to more than the United States, but I'm sure he's also referring to the United States. The basic plea throughout this report is that, as he says, a basic disinflationary monetary policy be given more support through budgetary and other policies, rather than using monetary policy alone.

Representative HAMILTON. You did not read that report, then, or at least the information you have about the report, as urging the United States to relax its monetary stance?

Mr. VOLCKER. Quite specifically, not the President's address. Now, he does make some references about not being too worried about short-term deviations from a target, but the speech as a whole is supportive of the need to maintain disciplined monetary policy.

COMMENTS ON RECENT TREASURY FOREIGN EXCHANGE INTERVENTION

Representative HAMILTON. Let me ask you about the Treasury's intervention in the money markets. It is only the second time that such a thing has occurred in this administration. The first time was after the attempted assassination of President Reagan. It has been clear that the policy has been not to intervene except in disorderly markets. Disorderly markets have not been present, at least in the judgment of the administration, until yesterday.

Now, is this a change in policy? Are we redefining disorderly markets? What has happened here? Are we responding to the pressure that the Europeans put on us at this point?

Mr. VOLCKER. I might say, in that connection, that it was the Federal Reserve's intervention in the market, but we do that in close conjunction with the Treasury.

Representative HAMILTON. Do you do it upon their instruction?

Mr. VOLCKER. I would not say instruction, no. We try to do it in cooperation, and I don't think either of us intervenes over the strong objections of the other. It's a de facto policy. We each have independent powers. They joined us in the intervention yesterday.

I wouldn't necessarily interpret it as a change in policy. There was a major realinement of exchange rates in Europe over the weekend, and the market was, I think, unsettled to a degree. Making those adjustments on Monday when it opened occurred when it appeared, under those circumstances, that it might be of some assistance to the market's settling down, so to speak, to engage in some intervention. It was not heavy.

Representative HAMILTON. Would you anticipate that there might be further intervention in disorderly markets?

Mr. VOLCKER. Certainly in disorderly markets. There have been a number of occasions in the past year or 18 months when some intervention was considered and we were prepared to intervene in the market. In effect it wasn't required in the end, but we have been and remain of the opinion that if it's necessary we'll do it—if it seems desirable in particular situations, we'll do it. There is no eagerness; there's no desire to go out there in big volumes and attempt to bulldoze the market, so to speak.

Representative **Hamilton**. What do you look for? What kind of criteria do you look for in defining disorderly markets?

Mr. **Volcker**. That's a question we have examined repeatedly over the years. This is not a new question.

Representative **Hamilton**. I was not posing it as a new question.

Mr. **Volcker**. No, I just want to indicate that this has been examined and reexamined. I, myself, don't think you're going to get a statistical rule for this, although you do look at such things as the amount of volatility, the speed of movement in a brief period of time. The degree to which rates may be entering into new territory may be a factor at times. So there are a variety of these considerations, some of which can be reduced to statistics as a first approximation. In the end it will be a matter of judgment.

THE FED: PUBLIC CONFUSION AND DOUBT

Representative **Hamilton**. Mr. Chairman, may I just make an observation. In one of your sentences you talk about the use of monetary policy objectives in terms of the aggregates as being a useful discipline and being helpful in communicating to the Congress and to the public.

Let me just enter a layman's point of view: I have much doubt about that. I think there is considerable confusion in the mind of the public, and of those of us who are not experts on the use of these aggregates. What the American people look to you for is performance in terms of inflation and jobs and growth in the economy. Most of us do not really understand the monetary aggregates; we find the debate that you and your bankers enter into exceedingly esoteric. Whether or not you hit the M_1 or M_2 aggregate target does not make a lot of difference to me, frankly.

What I am interested in is whether you create jobs and whether you bring the inflation rate down and whether you have growth in the economy. That is the kind of thing I think that has to be communicated to the American public. That is what your responsibility is, it seems to me; it is not to hit a particular aggregate target.

Mr. **Volcker**. I think I would agree with you, but I have to put more than a footnote on that.

Representative **Hamilton**. I am sure you do.

Mr. **Volcker**. That is obviously the ultimate test of economic policy generally. The two observations that I would make are first, that we at the Federal Reserve hold only one instrument of economic policy, monetary policy; and second, that in evaluating those end products, which are certainly the relevant factors in the end, you have to have some sense of time perspective. You're not going to hit them constantly—there's no way you can in this kind of dynamic economy that we have. I think the problem that we have been groping with is that the economy got pretty far off course over the past 10 or 15 years or more. Some trends had to be corrected, and it is a disturbing process in itself to get the trends corrected. The end product you quite rightly referred to has to be judged over a period of time and not when you're in the midst of the adjustment.

Representative **Hamilton**. Thank you very much. Thank you, Representative Richmond.

Representative **Richmond**. Thank you, Congressman Hamilton. Congressman Wylie.

Representative **Wylie**. Thank you, Congressman.

RECENT RISE IN PRIME RATE

Mr. Volcker, I realize there's a lot of second-guessing going on here this morning and we all are emphasizing interest rates and being somewhat repetitive in the process, but interest rates are on everybody's mind. All of our economic problems, especially unemployment, are being blamed on high interest rates right now. You answered this a little earlier, but interest rates have fallen since the peak of last year, of course.

I noticed in the paper this morning that Citibank had raised its prime interest rate again yesterday. Does that cause you concern?

Mr. **Volcker**. I'm concerned about the general level of interest rates, and in that context, I suppose I'd rather see it go the other way. As to that particular case, the Citibank prime rate was below the general level, so they were putting it back in line. I don't think that should be taken as indicative of either a general change in interest rates specifically or indicative of a trend.

VOLCKER: SURPRISED OVER HIGH INTEREST RATES

Representative **Wylie**. You made the point when you were responding to Mr. Hamilton's question a little while ago that generally interest rates, using the 3-month Treasury bill rate, have fallen. And that is true that it usually falls about 25 percent during a recession and it falls another 25 percent the first year or year and a half of recovery. We're generally following that pattern right now, aren't we?

Mr. **Volcker**. It's fallen. I think the high point was around 15 perent.

Representative **Wylie**. 16.3 percent I believe.

Mr. **Volcker**. It's a little over 12 at the moment. It was below that a week or two ago. It has some of the typical recession pattern to it, but I don't think it's fair to say it is entirely a typical recession pattern. That was probably true through October. The surprising thing was that interest rates stoped falling in October and, in fact, increased some over the winter, and then came down a little again while the recession was continuing; that was quite an unusual, maybe even a surprising phenomena. It happened, I might point out, when monetary aggregates were relatively high, not when they were relatively low.

I think it provides some degree of confirmation to the point I was making earlier that there is a desire to hold more cash, at least in the form of NOW accounts, in this particular period.

COMMENTS ON FEDERAL RESERVE POLICY IN THE 1970'S

Representative **Wylie**. Isn't a part of the problem the fact that interest rates were so darned high in the first place, and did they get that way because of fast money growth in 1970-80?

Mr. **Volcker**. They got that way fundamentally because of inflation and then from the effort to deal with inflation. You can go back and argue, with the benefit of hindsight, that monetary policy was too easy in some sense during the 1970's. That's an easier judgment to make with hindsight, and one has to look at a lot of other policies to see whether it was possible for the Federal Reserve to do that during that period. So I can, in a sense, share in that observation without being critical.

Representative **Wylie**. I did say that there's a lot of second-guessing going on.

Mr. **Volcker**. That's correct.

FUTHER COMMENTS ON VOLATILITY OF MONEY GROWTH

Representative **Wylie**. Does the volatility of money growth impact unfavorably on the credibility of long-run monetary controls?

Mr. **Volcker**. Some people argue that. I do not myself think, particularly now, let's say, that's a terribly critical factor, but there's no way I can prove it one way or another. I think we have enough of a track record of restrained constraint that short-term deviations are not going to be terribly upsetting to psychology. I would much rather—obviously, for communication purposes—have a very smooth growth in the money supply. I don't think that is consistent with the way the real world operates, but it would be wonderful if it happened. I've often made the point and I'll make it again, that if one looks at the international league, our money supply is not particularly unstable in the short run. In fact, it is probably the most stable in the short run, yet these same questions don't seem to be raised about foreign money supply behavior.

You have a tradeoff here—I don't think you can avoid it—between stability or rigidity of the money supply in the short run and the volatility of interest rates in the short run. I think Mr. Brown mentioned earlier, in quoting the U.S. News & World Report, that one factor in high interest rates is the volatility of interest rates themselves. I think the recent volatility in interest rates, probably is an element, and I would think that's probably more important than the volatility in the money supply. There's a tradeoff.

Representative **Wylie**. So that uncertainty has added to the risk.

Mr. **Volcker**. I think that general sense of uncertainty has probably added to the risk in the long-term markets as perceived by market people.

WOULD EASIER MONEY BRING DOWN INTEREST RATES?

Representative **Wylie**. Now, I had lunch with some homebuilders yesterday, Mr. Chairman, and they're concerned about their housing stimulus bill principally——

Representative **Brown**. A lunch you paid for? [Laughter.]

Representative **Wylie**. I did pay for the lunch, as a matter of fact.

Representative **Brown**. They're in real trouble. [Laughter.]

Representative **Wylie**. They asked me another question which you have answered rather indirectly, but I'd like a specific answer to it. They insist that if we somehow persuaded you to relax the money supply that that would bring interest rates down and would not do that much harm as far as inflation is concerned.

Mr. VOLCKER. Of course, that's a judgment we have to make. I think it would be counterproductive and most particularly counterproductive for problems of homebuilders—which are extremely severe, as you know—to attempt to achieve a very short-term interest rate reduction in circumstances where money clearly is being provided at the expense of the longer term needs of the economy. The net result would jump up and bite them by producing high long-term rates in the future, maybe even in the short run, if the market sensed that was an inflationary monetary policy. To put it in its crudest terms, you wouldn't get any help for long-term rates that way, in my opinion; it would hurt the homebuilders.

That's the difficult judgment we always have to make. People would like to reduce this to a statistic. I have indicated the kind of considerations we have had during the first half of the year; I don't interpret what went on in the first half of the year as inflationary, but some people could look at just the figures and say, "Well, that looks relatively high to me, and it's much too high, and you should have a still lower money supply." a mechanical application of a target says we're running a percent or so above on M_1 at the moment, which reflects the kinds of factors I alluded to earlier, but you can't reduce the question entirely to a statistical answer.

Representative WYLIE. Well, that was along the lines of my answer but not quite the same.

Mr. VOLCKER. I can imagine.

SHOULD CONGRESS TELL THE FED WHAT TO DO?

Representative WYLIE. May I say that we get all kinds of advice. On the plane coming over here this morning a gentleman who has been very successful in business, I might say, and whose advice we ought to pay attention to and which I pay attention to because he's a distinguished gentleman, recommended that what we really should do is to bring the Federal Reserve directly under the control of Congress. I said that I didn't think you wanted that much help right now and I wasn't sure that we wanted to get into that thicket. What would be your reaction?

Mr. VOLCKER. Of course, we're an agency which was established by the Congress and you have the ultimate power or right, but I obviously think it would be a mistake to do that.

The Federal Reserve has been in existence now for almost 70 years with the same basic structure which, by design, provides a kind of insulation from short-term and partisan pressures. I think there's also a recognition that some very technical elements enter into these judgments. I'm afraid I have more than amply made that clear in my statement this morning. It isn't easy to pronounce a particular figure as the answer to all problems.

Those two things—the sensitivity of the subject as needing a little longer range focus and the technical complexities of the subject—have pointed toward the wisdom of something like the present arrangement, and it's been my sense that Congress, by their action or inaction through the years, has accepted that argument. It seems to me it's still valid.

Representative WYLIE. Well, I think it is, too. Thank you very much. My time has expired.

Representative RICHMOND. Thank you, Congressman Wylie.

WHO IS RESPONSIBLE FOR HIGH INTEREST RATES?

Mr. Volcker, it's always a pleasure to see you. Chairman Reuss has had a series of hearings here, as you may know. He's invited economists from academia and major corporations, and we've heard from dozens and dozens of people who really feel they have a grip on the Nation's economy. Most every economist came before us these last couple weeks and blamed the high interest rates on the Federal Reserve's money policy.

Now I don't personally agree with that, I think the high interest rates are virtually beyond your control. But do you feel that the Federal Reserve is responsible for the high interest rates or do you feel the Federal deficit and our budgetary deficit, which as you know and I know will be much higher than we projected, are perhaps much more the reason for the high interest rates?

Mr. VOLCKER. Well, the deficit is certainly one very significant factor to me, but I wouldn't say it's simply the budget deficit either. I think we are dealing with an inherited situation. You're never going to explain interest rates today without looking back a bit in history. You get into these questions of inflation and inflationary expectations. Indeed, you get into the question—let me go this far—that we are conducting basically a restrictive monetary policy in the sense that we have quite deliberately not provided enough money to feed inflation. We haven't got a technique for saying we're not going to provide money to feed inflation, but we're going to provide lots of money for feeding the economy, because we've only got one spigot. So you have had off and on, at least during these years, a sense in which the economy hasn't had as much money as it would like in order to keep going with the same momentum of inflation and expansion.

That's reflected in pressure at least on short-term interest rates in the short run. So that's an element and I think this is the element that many of your witnesses were picking out. But I think then you have to go on and say can you escape that? Is there a way out of the dilemma so to speak by, in effect, inflating? My answer to that would be you're only going to be led back to a rising trend of interest rates over a period of time to make it worse, not better.

DISCUSSION OF HIGH INTEREST RATE AND BUSINESS INVESTMENT

Representative RICHMOND. Mr. Chairman, we have a situation in this country now where American industry which knows it has to modernize, which knows it has to keep up with the times in order to compete with our Japanese and German competitors, can't borrow money at a price reasonable enough to allow it to modernize. You and I know that no corporation can afford to go out and borrow money at 16.5 percent plus compensating balances which makes it 18 percent and invest that in building and equipment and robots and automation of any kind, right? It just can't be done. You and I know that in industry we have to amortize our modernization over 4 years, that the usual interest indicators we use is 7, 8, or 9 percent, and if we can't borrow money at those rates we can't afford to modernize.

What worries me is here we have this gigantic industrial base in the United States which is eroding. Japan will next year by a larger producer of industrial goods than we will. Yet the average corporation that wants to modernize can't go out and borrow money at a rate adequate to modernize. So we're chasing our tail. When you say we're hitting the bottom of the recession, I'm inclined to agree with you, but I don't think we're going to get out of the bottom. I think we're going to stay in a very flat period, and, as Senator Proxmire said and I agree with him, "look toward many, many years of stagflation."

Now until we get some handle on these interest rates which means we must get a handle on the Federal deficit and we must improve investor confidence, I don't see how America is going to get out of this recession—and through no fault of yours.

WILL CONSUMER SPENDING AND INVENTORIES LEAD A RECOVERY?

Mr. VOLCKER. I agree with the general line of your statement. I wouldn't be quite so pessimistic about the recession and the recovery. I think in large part what's at stake is what is what kind of recovery we'll have. At the moment, one would assume it has to be inventory- and consumer-led. Ideally we would like to have a sustained recovery led by investment.

Representative RICHMOND. Capital expenditure.

Mr. VOLCKER. With housing participating. That's not going to happen in the immediate future; I would agree with that.

Representative RICHMOND. Then how are we going to get out of this recession?

Mr. VOLCKER. I think we can get out of the recession by sustained consumption. We have had some increases in consumption recently, as was mentioned, and we have a tax reduction coming along in a couple of weeks which should help sustain and maybe improve consumption. We've been going through a period of substantial inventory liquidation, and that presumably will not persist indefinitely.

Representative RICHMOND. Mr. Chairman, at the price that the average retailer has to pay for his money, he literally can't afford to have inventory on hand.

Mr. VOLCKER. There are certainly forces pushing toward economization on inventory. That doesn't mean they're going to be reduced indefinitely, but certainly I think you can say people are going to economize on inventories and not have the same rate of liquidation as we've had recently.

Representative RICHMOND. As long as the retailer has to pay 18 to 20 percent for his money he cannot afford to keep inventory in his shop beyond the barest minimum and everything has to be on order. You can't run a business and pay 22 percent interest.

Mr. VOLCKER. I don't think it's as high as 22 percent.

Representative RICHMOND. But small people are paying that kind of money.

Mr. VOLCKER. There's a pressure to keep inventories as low as possible but that pressure has been there for a considerable period of time and I suppose I'm making a rather technical point. We've been going through a period of really record inventory liquidation.

At some point, that will stop, and the mere fact that it has stopped will help push the economy ahead, because people are no longer living off the shelf. They have to make the new orders that you referred to, and when they make new orders it stimulates production and employment. When you get that kind of process in prospect, you see evidence of sustained consumption. That's not an ideal kind of expansion, I fully agree with you, but I was simply making some modification or taking exception to your argument that we can't have any recovery at all. I think we can have an unsatisfactory kind of recovery, and what we want to do is convert that into a much healthier kind of recovery, where interest rates are lower and there is a stimulus to the kind of investment that you and I are interested in. It's going to take some time.

Representative RICHMOND. It's going to take some time. It's going to take a reduction of the Federal deficit. It's going to take increased investor confidence. It's going to take capital expansion.

Mr. VOLCKER. Right.

ECONOMIC RECOVERY WILL NOT BE SOON

Representative RICHMOND. All these things I just don't see coming in the near future with interest rates what they are today.

Mr. VOLCKER. It depends on what you call the near future. I think all those things can come as the economy recovers. If you talk about next quarter or the following quarter, I think your perspective is correct. When you get into 1983, 1984, and the years beyond—and I think we're playing for the long run here——

Representative RICHMOND. Let's say none of us really know how we're ever going to get out of today's recession. Am I right, Mr. Chairman?

Mr. Volcker. No, I think that's overstating it. I suggested a logical way we're going to get out. I think the great majority of economic forecasters share this view. I'm not saying anything very unique. I think there is a general sense that the most probable course of events is going to be some recovery of the nature I described, not an investment-led recovery in the short run.

CONFIDENCE AND EXPANSION

Representative RICHMOND. In every industry I've looked at, I can't personally see what's going to start the recovery because with facts as they are, with no possibility of interest rates going down—in fact, the probability is that interest rates are going to go up—I can't see how the real medicine necessary to cause the recovery is going to get started. And you and I know what the real medicine is. The real medicine is investor confidence and capital expansion. I'm talking about real recovery, not just a temporary jump.

Mr. VOLCKER. I think that can follow on, and that's what our policies ought to be aimed at encouraging. The tax measures and other measures are taken in that direction. They're not very effective at the moment when we're in the midst of a recession and have these interest rates that you're referring to, but structurally the measures are in place, and I think will become useful as the recovery proceeds if interest rates come down.

What does it take to bring interest rates down? You mentioned the budgetary situation, and I won't repeat that. I think it takes some sustained sense of confidence that inflation indeed is going to continue to come down. I think that's going to happen, but there is not yet full confidence out there. It comes back to the confidence problem that you mentioned.

That's what makes the policy decision so difficult right now. We must not do anything to destroy that process of disinflation, if you will, that restoration of confidence, and at the same time we're dealing with a very difficult recession. There is an instinct toward doing what we can at the moment to push interest rates down in the short term; I'd love to see interest rates come down in the short term, but I don't want to jeopardize the more important process over a period of time.

Representative RICHMOND. Thank you, Mr. Chairman. Representative Heckler.

Representative HECKLER. Thank you, Congressman Richmond.

WHAT MUST CONGRESS DO BEFORE THE FED WILL REDUCE INTEREST RATES?

Chairman Volcker, for several months now we have heard different messages from the economy. Earlier this committee held extensive hearings on productivity. As a result of the clearly defined problem of productivity in our country versus world competitive forces, we were anxious to pass the accelerated depreciation provisions of the tax bill that was enacted last year. Business assured us if that were done there would be investments in new plant and equipment and the economy would take off, and our productivity would be increased.

However, that progress did not follow because of the interest rates which the Federal Reserve has maintained. In testifying before this committee on many occasions, you have said that you're not satisfied with the activities of Congress in terms of dealing with the economy. You insisted that the budget be reduced substantially and that inflation be reduced as well as a precondition to recreating a more active lowering of interest rates which would create more activity in the economy itself.

Now we have indeed reduced our budget. The House budget deficit which was just passed is under the magic figure of $100 billion, which I think is quite mind boggling to almost every American, but nonetheless, compared with the baseline target of $182 billion, is a significant improvement.

We know the level of the Senate budget figure. We know the conference will come out with the figure which is somewhere between the two and that there has been a substantial effort by the Congress to reduce Government spending as a means of dealing with the problems of the economy and reducing inflation.

Nonetheless, despite the fact that the inflationary impact has decreased, that statistics now show a very substantial reduction in inflation, you indicate that indeed the fight against inflation is not won, and I don't think we claim that it's won. We do claim a serious effort at controlling it in a sustained direction, I think, by a majority of the Congress.

The fact is that this inflationary impact is not enough. Lowering the inflation rate is not substantial in your view.

Mr. **Volcker**. That's not quite right. I think it is quite substantial. I say we can't relax.

Representative **Heckler**. It's substantial but you have no confidence in it because until this inflation rate is sustained for a longer period you will not feel confident——

Mr. **Volcker**. I feel quite confident. I think I was referring to what the general impression was.

Representative **Heckler**. Well, the general impression is one thing, but the general impression is very much influenced by your impression and your policies at the Fed.

I feel that a major breakthrough has been made—but it is not influencing you. You are not sufficiently satisfied with the underlying forces. You evidenced and expressed a concern that inflation potentially remains a very serious problem. Therefore, on the inflation indicator of today in your mind as the Chairman of the Federal Reserve Board, you're not yet satisfied.

There are those who say that the budget with the substantial reductions shows very substantial congressional restraint. That, too, does not satisfy you. It's interesting for me to listen to my colleagues, some from Ohio, who say that the high rate of unemployment in their area is attributable to interest rates—to the high interest rates. Well, we also are suffering from high unemployment in Massachusetts, and I would suggest that in that context, in that world, the rate of unemployment is attributed to President Reagan. The issue has been and is being discussed everywhere. The issue is Reaganomics.

As I look at the issues before the Congress and the problem of high interest rates and the future of our economy and the question of recovery from this recession, I have to say that for all the goodwill that I know you possess and sincerity of views that you hold and the respect I truly have for you, nonetheless, Mr. Chairman, I have to say I am beginning to feel that the problem in this economy is Volckernomics. Is there a feeling on the part of the Fed that all of the substantial gains and progress made by the Congress are not enough? When will you, as Chairman, be satisfied? When will inflation be sufficiently licked to have you say that interest rates can be reduced? How can this economy recover, unemployment be stemmed? The potential loss of economic insurance, small businesses threatened with major bankruptcies during the forthcoming months that have already suffered substantial economic injury—when will we find that we have reached enough?

SHOULD CONGRESS CONTROL THE FED?

At this point it seems that there are two potential answers, and I never quite thought I would find myself thinking seriously about having a Federal Reserve Board and its leadership in tandem with an administration. But since there seems to be such a difference in attention and difference in measurement of direction of the economy, I question now whether or not the Federal Reserve should be brought under the authority of the Congress itself. I don't prefer that, but I question whether or not the Chairman of the Federal

Reserve Board should be a Cabinet member of the President's Cabinet—any President's Cabinet. That would be one response to having our policies flow in one direction.

SHOULD THE FED STOP TRYING TO CONTROL THE MONEY SUPPLY?

A second response—and I would ask your reaction to both—comes from a series of meetings that I held with economists who are also very critical of Volckernomics and feel that indeed the Federal Reserve System itself has produced a great deal of the instability in the market itself today and in the economy.

Their suggestions take a totally different line. They sugggest that we deregulate the supply of money, that the Fed cease to target money supply, which would, in their judgment, create a freedom from market pressures that are related to the Federal Reserve's investment of Government securities.

There are those who say with that line of thinking that the Federal Reserve should cease to tie policy to interest rates or give indirect signals to the money markets about the level it considers appropriate. They argue this would make money traders look at real inflation rates and break their present focus on what the Fed expects them to do.

They also feel that the Fed should curb its intervention in financial markets, keeping its securities holdings neutral around current levels of about $138 to $140 billion—that this would correct the basic error of recent years in which the Fed provides the reserves at desired rates of expansion in the money supply and the economy and then finds that it has supported much more inflation and money growth than it had intended.

Obviously we are at a serious impasse between the alternatives of dealing with an economy that is at a standstill, a recession potentially bottoming out, an economy that you suggest will recover, albeit anemically, with the face of inflation becoming more alarming every day and the bankruptcy rates of small companies at a very disturbing level.

Between the two choices—first, having the chairmanship of the Federal Reserve a cabinet rank position or a deregulation of money and second, having the Federal Reserve really get out of the business of purchasing Government securities to allow the free market and the judgment of the marketplace on inflation to determine interest rates—which would you prefer and how would you comment?

VOLCKER'S RESPONSES: CONFIDENCE IN THE FED IS GROWING

Mr. VOLCKER. I'm not sure those last two are exactly alternatives, but let me go back to your initial comments, because I think they may reflect a misunderstanding of my position that's more than semantic. You kept asking whether I'm satisfied. That's not the point at all. I think we are making remarkable progress on inflation. I don't think that's something we can turn on or off. What I was reporting was a good deal of skepticism among the American public as reported in polls or elsewhere. I can't rewrite the history of the past 10 or 15 years that give rise to that. I think we are making remarkable progress on inflation.

I also am delighted that the Congress is making the kind of progress that it's making on the budgetary resolutions. But it's not my perception alone that counts. It's the questions that understandably linger in the minds of market people and others about whether there will be a full followthrough on that progress. I think it is heartening, and I think everybody would say it's heartening that you've gone in that direction, but you're not going to solve these problems with the stroke of a pen. I don't have that kind of power; I think your statement implied that I have or that the Federal Reserve has a degree of power or influence on these attitudes and behavior that we simply do not have.

You suggest two different kinds of remedies, if that's the right word. One is a political reorientation of where the Federal Reserve is located, and I would make the same kind of comments that I made to Mr. Wylie earlier about the rationale for the Federal Reserve's being——

Representative Heckler. Yes; we heard that. I have only a minute remaining. I'd love to have your comments on the second answer, which I consider the most plausible one, allowing the market itself to be the determining factor and forcing the Federal Reserve to stop intervening in the market through the purchase of securities.

THE FED MUST STILL CONDUCT MONETARY POLICY

Mr. Volcker. The market, in the end, will be the determining factor. I think if the Federal Reserve in fact went entirely to the sidelines, never bought or sold any Government securities—I don't know if you want to close the discount window as well—but just stood aside, the market would perform with a great deal more discontinuity and a great deal more interest rate fluctuation than it does now.

Where the general level of interest rates would be, I don't know. If the Federal Reserve literally never provided any reserves and never made any room for an increase in the money supply, I think you might have a pretty effective anti-inflation program over a period of time, but the question is what economic damage would be done in the process.

Inherently, the problem is that you get witnesses who say the real difficulty is we're not increasing the money supply fast enough, and then you get other witnesses who say the real difficulty is it's increased too fast.

We get all kinds of advice and you get all kinds of advice. I think the question is how you organize this area so that you think not only the best judgment but also the best kind of political environment is provided for making extremely difficult and controversial decisions most effectively on balance.

Representative Heckler. I thank you, Mr. Chairman. I would say that I'm not surprised by your response, but I think that at the present time we have to question all judgments and I think really as we face the projections and forecasts for this economy in the forthcoming several quarters without some relief or degree of relief I do not see how a very serious recession can be avoided and we're all a part of that decision.

Mr. VOLCKER. I understand your concerns and, indeed, we're all a part of that decision. Let me just repeat that we are in extremely difficult economic circumstances, but at the same time I think we have a very promising opportunity to lay the groundwork for a much more effective economy in the decade ahead. I understand your concern and it's obviously well rooted in what's going on at this instant in the economy, but I think when one tries to stand back a little bit and assess what's going on from a lot of different directions—and I obviously put a lot of weight on the inflationary situation precisely because I think it is getting better and that's not recognized as widely as it should be—then I think you'll find the foundation is being laid for a much improved situation.

Representative RICHMOND. Thank you, Representative Heckler. Senator Kennedy.

FED SHOULD BE MORE ACCOUNTABLE

Senator KENNEDY. Thank you very much. I want to welcome Mr. Volcker back to the committee. As Mr. Volcker understands, this is one of the few opportunities that any of us in the Congress has to question you or have any impact on the important area of monetary policy. And that is part of the frustration that I feel and that millions of the people across this country feel, because these monetary decisions are being made outside of the control of the Congress or the President of the United States. That is an issue I want to talk about this morning.

That is one of the reasons why I have suggested that the Fed be put into the Treasury. The American people want to hold the President accountable. They want an opportunity to hold him accountable. Then, we wouldn't have this constant shifting, this constant sheil game where an administration takes credit for reducing inflation and then bucks the blame over to the Fed for unemployment and high interest rates.

ARE YOU GOING TO KEEP GRINDING THE ECONOMY DOWN?

My question has been asked in a variety of different ways. I'll put it to you simply. How long are you going to keep grinding the economy down?

Mr. VOLCKER. I would not describe our policy in that manner at present. We obviously have no——

Senator KENNEDY. There are a lot of people across this country who would, and if you don't understand that——

Mr. VOLCKER. I understand that some people may say that and interpret it that way, but I would say quite the contrary. I might say, too, Senator Kennedy, that I don't think it is quite right or fair to say that you, the Congress, have only rare opportunities to talk with us. I haven't brought along a list of how many times I'm up here before the Banking Committees or the Finance Committees or the Appropriations Committees or the Joint Economic Committee, but it adds up to a fair number of times in the course of a year; at times in the year when economic policies are intensely debated, it may be several times a week.

Senator KENNEDY. I don't think there's any question, though, that your relationship with the Joint Economic Committee, which doesn't have legislative authority, is entirely different than one of a cabinet member appearing before a congressional committee with authorizing authority and appropriating authority. I dare say that, if you were up here as an officer of the Department of the Treasury before the committees which have that jurisdiction, the relationship would be different. You may differ with that.

Mr. VOLCKER. I think that might be, but of course that's deliberate.

Senator KENNEDY. Well, it's the way it exists now. And at least from this Senator's point of view, it's one of the reasons the Fed ought to be changed.

What is your answer to those who say that the Fed is embarked on a scorched-earth policy with regards to the American economy? Millions of young potential home buyers feel the burden. Millions who are out of work feel it. Million of small business men and women feel it. Millions of farmers feel it.

Mr. VOLCKER. Let me say, first of all——

Senator KENNEDY. Is this your policy or is it the Reagan policy?

Mr. VOLCKER. I can only speak for our policy authoritatively. Let me say that monetary policy is an important instrument, but it's only one instrument of economic policy.

Senator KENNEDY. I understand.

Mr. VOLCKER. We are embarked, so far as we influence economic activity, in trying to lay the groundwork for a much more satisfactory economic performance than this economy has experienced for a good many years. I think that is the whole object.

WHY ARE SHORT-TERM RATES SO HIGH? WHO IS RESPONSIBLE?

Senator KENNEDY. Let's take short-term interest rates. I have a chart here which shows that real short-term rates for the last 20 years were virtually stable, with the exception of 1981 and 1982, when they've gone right up through the roof. For 20 years, real interest rates, after inflation is taken into account, were 3 percent on loans. Now they are over 10 percent. Who is calling the signal—is it you or the President?

Mr. VOLCKER. I don't think anybody is calling the signal on these interest rates. Take the postwar period following the depression.

Senator KENNEDY. This is a chart for 20 years.

Mr. VOLCKER. It includes a lot of those years. We had probably the brightest period of economic growth and stability in this country and indeed around the world that the world has ever seen. We had a stable, growing economy, a productive economy, with productivity increasing 2½ or more percent a year, with some cyclical adjustment. The cycles were small against all of history.

That is hardly a description of the 1970's. We had rising inflation. We had a scare, you can well remember, in early 1980, with the recorded inflation rate being 17 percent or so, and with people concerned about whether it wouldn't go much higher and whether this was not just a new plateau but a launching pad for much more acceleration.

We haven't had any productivity growth for years. We haven't had any increase in real income for the average American for some years. This is not an environment in which one would expect financial markets to perform with the degree of stability and orderliness with which they performed during the great bulk of the postwar period.

Senator KENNEDY. I apologize for interrupting but we're on a 10-minute rule, as you well understand.

Mr. VOLCKER. I finished my point I think.

Senator KENNEDY. Wouldn't that explain the long-term rates but not the short-term rates? With the low rate of inflation today, those arguments don't apply to short-term interest rates.

Mr. VOLCKER. I think it may explain more of the long-term rate in relation to history, but short-term rates have always been quite volatile around a much lower level. If you look at the amplitude of fluctuation, they used to go up and down from 3 percent to 7 percent, even when the economy was more stable; that is a very big short-term fluctuation.

Senator KENNEDY. They were never as high as they are at the present time.

Mr. VOLCKER. They've never been in absolute terms. In relative terms I think short-term rates have been.

CHAIRMAN VOLCKER'S LACK OF CONTACT WITH THE PRESIDENT

Senator KENNEDY. Let me get to one other area. You have probably read the reports from Versailles where the President was reported to have said the Federal Reserve has brought on the recession and then told Chancellor Schmidt we can't order the Fed around.

Now it would appear to me that this administration is trying to take the credit for bringing inflation down but blaming you for the recession. What's your reaction?

Mr. VOLCKER. I have no knowledge of that conversation and I approach those reports with a bit of caution.

Senator KENNEDY. Do you talk to the President about the rate of interest?

Mr. VOLCKER. I talk to various administration officials frequently.

Senator KENNEDY. And the President of the United States?

Mr. VOLCKER. Much more rarely.

Senator KENNEDY. How often would you say?

Mr. VOLCKER. Every few months.

Senator KENNEDY. When was the last time?

Mr. VOLCKER. I don't recall exactly. Maybe February.

Senator KENNEDY. You mean the President of the United States hasn't talked to you about the rate of interest in this country since last February?

Mr. VOLCKER. For some several months anyway. I talk to his appointees frequently.

Senator KENNEDY. But the President is the person who is elected, Mr. Volcker, and he was elected to do something about the economy. When we have millions of people unemployed, and record interest rates, the last time the President talked to you was months ago?

Mr. VOLCKER. That is my recollection right now.

Senator **KENNEDY**. Well, who else have you talked to? How about the Secretary of the Treasury?

Mr. **VOLCKER**. I talk to him frequently.

Senator **KENNEDY**. When was the last time?

Mr. **VOLCKER**. The last time I talked to him was yesterday.

Senator **KENNEDY**. What did he say to you or what did you say to him? Can you tell us?

Mr. **VOLCKER**. I think it would be inappropriate to discuss the conversation. That conversation yesterday was not about interest rates particularly.

Senator **KENNEDY**. Did he mention to you that the President was bothered by the high interest policy?

Mr. **VOLCKER**. Yesterday, no.

Senator **KENNEDY**. When was the last time? Can you tell us, just approximately, when was the last time an administration official indicated to you that the President was bothered by high interest rates?

Mr. **VOLCKER**. I don't remember exactly, but it's not an uncommon expression because we are all bothered by high interest rates.

Senator **KENNEDY**. Well, you know what I mean.

Mr. **VOLCKER**. I just can't answer the question as to when somebody said, "I want to tell you directly that the President is upset by high interest rates."

Senator **KENNEDY**. There's a difference between saying he's concerned, sending a message. I don't think it takes more than a high school student's first year course in civics to understand that interest rates follow the flag. Presidents at different times have had their differences with the Chairmen of the Fed, but basically the Fed has followed the administration.

It seems to me that this Fed is following the flag, too. The President of the United States has shown no greater personal concern than to talk to you about high interest rates 3 or 4 months ago. I think that's important, unless you can give us some indication or some conversation or some intervention by an administration official who has spoken to you about the issue of high interest rates.

Representative **RICHMOND**. Thank you. Senator Hawkins, I'm sorry to keep you waiting so long.

SENATOR HAWKINS URGES THAT CONGRESS CONTROL THE FED'S BUDGET

Senator **HAWKINS**. Chairman Volcker, if I were President, I'd have you up for a visit every Monday and we'd have fireside chats or maybe some woodside chats.

I know you like to be independent, Mr. Volcker, because we've had this conversation before. You reiterated today that you feel strongly that the Fed should be independent of the Congress because monetary policy is complicated. Yet we don't leave war to the generals over at the Pentagon although that's a complicated subject, too.

Mr. **VOLCKER**. Congress has the authority over the Federal Reserve. It's a question of the degree to which they're going to exercise it.

Senator **HAWKINS**. I believe the Fed should be subject to the congressional appropriations process. I think that gets everybody's attention. It's obvious to me that that's a weakness in the law and it should be changed. As you know, I've introduced legislation that would put the Fed under the appropriations process.

I'm interested in a word you used this morning about economization in government and economization of small businesses. Many times I've heard you say that the spending cuts weren't great enough. You're calling for greater spending cuts than those originally requested by the administration when they submitted their proposed 1982 budget. However, statistics published by the Board of Governors indicates that the Federal Reserve Board spending is increasing and is completely out of control.

In the last decade such spending has greatly exceeded the inflation rate. Isn't it true, then, that the Fed itself is part of the problem?

Mr. **Volcker**. No; I haven't got those figures in front of me but I would be glad to review them with you.

In the 5 years from roughly 1975 to 1980, as I recall, Federal Reserve employment in total went down about 13 percent. There were increases in productivity in our operations running 7 to 8 percent a year or more. In the last 2 years, we have had an increase in employment which changed that trend. We are still below the peak levels of employment that we had 7 or 8 years ago, yet the volume of our operations has probably doubled or more over that period.

Senator **Hawkins**. Over the long term, operating costs of the system have risen by 800 percent since 1950 while the Consumer Price Index has risen over 200 percent.

Mr. **Volcker**. I'm not familiar with the figures going back to 1950. I'd be glad to look at those figures. I can speak from memory to some degree since 1975, which I think is the period that's perhaps more relevant.

Senator **Hawkins**. Wouldn't it be a good idea to place the Fed under the appropriations process, since you spend over $1 billion a year?

Mr. **Volcker**. That's a fundamental decision for the Congress. I obviously do not think it's a good idea. As I suggested earlier, I think it is inherent in the structure of the Federal Reserve, as it was organized in 1913 and has continued to operate, that, in the judgment of the Congress, a degree of insulation should be provided from precisely the kind of pressures that you may have in mind.

DISCUSSION OF GAO RECOMMENDATIONS

Senator **Hawkins**. I have a report from the GAO on the Federal Reserve in which they recommended several steps for the Federal Reserve to eliminate subsidy of the check clearing operation. This was issued in February of this year and I'd like to check with you and see if you know if any of these recommendations have been taken.

ELIMINATE FLOAT

They recommend that the Fed should have a greater commitment to recovering the cost of the float, the float of course being the interest-free advance which arises when the account of the deposit bank is credited with funds before the funds are deducted from the paying bank. The GAO says that the Fed should move immediately to price or eliminate float. Any delay results in loss to the Treasury earnings of the United States of $30 million per month or about $350 million a year.

Do you know if you have moved on that?

Mr. VOLCKER. We have taken further steps since that time. We have been working on this problem for some time and have dramatically reduced the level of float. I don't recall the exact figures but my memory is that it may be running at half the level of a couple years ago, maybe less than that. It's a problem we're continuing to work on. It involves difficult problems for us and for the banking system. This is a matter that affects every bank in the United States.

Senator HAWKINS. Would you agree that a loss to the Treasury of $30 million a month should demand your immediate attention?

Mr. VOLCKER. I don't know about that precise figure, but this has had our attention for a long time and progress is being made.

RAISE FEES FOR COMMERCIAL USERS OF EFT

Senator HAWKINS. Currently the Fed allows commercial users of the electronic funds transfer to use the service at a fee below market values. Is that correct?

Mr. VOLCKER. What service?

Senator HAWKINS. I understand from the GAO that the Federal Reserve allows commercial users of the electronic funds transfer to use the service at a fee below market values.

Mr. VOLCKER. I'm not sure what they're referring to in electronic funds transfers. Our regular wire transfer service is priced not just at cost but rather with a markup to reflect the costs that we do not have, as a public agency, that a private corporation may have. There is something called an automated clearinghouse that is priced below present unit costs on the theory, which is rather widely accepted, that this will provide more efficient payment services for the public over time but you've got to build up the volume, and you can't build up the volume if you charge at unit cost when the volume is still low. This is typical of business behavior; when they've got a new service—and this is a relatively new service—which requires some initial investment, they're not going to cover the unit costs until volume builds up. We do not cover the unit costs on automated clearinghouses.

We are reviewing the pricing of that service and are committed to eliminating the subsidy, if you will—eliminating below-cost pricing over a period of time in the hope and expectation that volume will build up.

Senator HAWKINS. Do you have a target for that? Do you have an overall goal?

Mr. VOLCKER. Yes, we do. I don't remember the exact time period. It's over a period of 3 years or so as I recall.

Senator HAWKINS. Could you provide that to this committee, please, your overall goal?

Mr. VOLCKER. Yes.

Senator HAWKINS. And exactly how much subsidy you are presently providing?

Mr. VOLCKER. Yes. We have a definite time schedule, and I can provide that to you.

Senator HAWKINS. I think it's very important that the public understand that without congressional oversight the Fed itself is in pretty bad shape as far as recovering its own expenses.

FED IS MOVING TO RECOVER COSTS OF SERVICES

Mr. VOLCKER. I just have to deny that the Federal Reserve is in pretty bad shape, and I do not think any of those GAO reports reflect that. If you look through the GAO reports, I think you will find a good many words of accommodation and satisfaction with the way the Federal Reserve is administered internally.

Senator HAWKINS. The bottom line is that the GAO recommends congressional oversight to focus on how the Fed responds to market forces—that is, the degree to which the Fed achieves the objective of pricing services over the long run without subsidy.

Mr. VOLCKER. Right.

Senator HAWKINS. Yet you have two services that are priced way below—one of them would provide $350 million a year to the Treasury.

Mr. VOLCKER. We are moving on both of those. This recovery of cost is an entirely new concept to the Federal Reserve. We don't disagree with it, but it was not public policy to adopt that course until 2 years ago with the passage of the Monetary Control Act. Essentially all of our services are now priced, and we are returning a good deal more to the Treasury than we did before for that reason.

I might point out we did provide about $14 billion to the Treasury last year.

[The following information was subsequently supplied for the record:]

FEDERAL RESERVE SYSTEM EXPENSES

By any measure, the Board of Governors during the past decade has maintained firm control over expenses of the Federal Reserve System, especially in light of its greatly expanded responsibilities during the period. Indeed, the rate of increase in the Board's expenses (6.8 percent annually on average from 1971 to 1981) has been less than that of either the Consumer Price Index (8.4 percent) or the GNP Deflator (7.2 percent).

Expenses for the System as a whole (all Reserve Banks and assessment for the Board of Governors) increased at an average annual rate of 9.8 percent. The implied average annual increase in real terms of around 2.6 percent (9.8 percent less than the GNP Deflator) has covered much larger average annual workload increases in areas where volume is measurable: commercial checks 7.5 percent, currency 5.1 percent, food stamp processing 3.6 percent, and funds transfers 20.8 percent. In "nonmeasurable" areas, Federal Reserve responsibilities also have grown significantly, mainly as a result of the Bank Holding Company Act amendments of 1970, the Consumer Credit Protection Act and other consumer related legislation, the International Banking Act, and the Depository Institutions Deregulation and Monetary Control Act. Supervision and Regulation resources were strained to handle work resulting from mergers of commercial banks and acquisitions by bank holding companies and the expanded role in inspection of bank holding companies, as well as from other industrywide changes in the commercial banking business. In the monetary policy area, there have been increasing demands for more frequent and timely statistical reporting as the public's awareness of the importance of monetary policy has increased.

We might also note that during this period, 1971-1981, when the Federal Reserve System's average annual increase in expenses was 9.8 percent, the non-defense budget of the federal government increased at a rate of 14.0 percent, and that of the legislative branch at a rate of 12.2 percent.

In the more recent period 1974-1981, the System's expense growth on an average annual basis was only 8.3 percent (versus the federal government's nondefense budget of 14.7 percent), and employment at Federal Reserve Banks decreased during the period by 11 percent (versus 3.8 percent growth for the federal government). (Between 1974 and 1979, our drop in employment was 13.6 percent; the passage of the Monetary Control Act in 1980 required additional employees mainly for maintaining the new reserve accounts required by the law and the implementation of pricing and billing procedures.) Efficiency in check collection, the System's major production area, contributed greatly to our financial performance: the unit cost in this activity increased by only 6.6 percent between 1974 and 1981 unadjusted for inflation (the increase in inflation during these years was 68.6 percent). From 1950 to 1981, total System expenses increased at an annual rate of 8.0 percent, approximately the average annual growth rate of the Gross National Product, which was 8.1 percent. During the same period, the federal government's nondefense budget outlays increased at a rate of 9.5 percent and those of the legislative branch at a rate of 10.4 percent. Of course, data on Federal Reserve System expenditures over such a long period are not meaningful without taking account of the qualitative and quantitative changes in our service levels and regulatory responsibilities during the period.

FLOAT REDUCTION AND PRICING EFFORTS

The Federal Reserve has made a major commitment to eliminating float. During the thirteen week period ending on June 2, 1982, average daily float was only $1.9 billion, compared to $4.8 billion during the thirteen week period prior to passage of the Monetary Control Act. Thus, in a little over two years, float has been reduced, through operational improvements, by 60 percent.

Indeed, the GAO in its recent report on Federal Reserve Check Clearing operations noted that the Federal Reserve had made significant reductions in float since enactment of the Monetary Control Act, indicating also, of course, that a substantial amount still remained. The Federal Reserve has retained its momentum in reducing float, and, since the GAO's report, float has been reduced by a further $.8 billion or 42 percent.

The System is also developing a comprehensive plan and timetable for eliminating and then pricing any remaining float. The plan will be completed and announced publicly during the summer of 1982 and will include both a timetable for further float reductions through operational improvements and a schedule for explicit pricing of any remaining float. We plan to have reduced float to well below $1 billion by early 1983, and we will continue to aggressively reduce and hold down float levels as the principal means of meeting the objectives of the Monetary Control Act.

Although the remaining float does result in a loss of revenue to the Treasury, compared to its complete elimination or full pricing, the Federal Reserve's projections of positive net revenues to the Treasury under the Monetary Control Act have been realized. The latest estimates of the MCA's impact on Treasury revenue, both for 1981 and prospectively for 1982, show a modest net increase in net Treasury revenues from the pricing and reserve requirement provisions of the Act.

AUTOMATED CLEARINGHOUSE PRICING

The Federal Reserve has adopted an incentive pricing strategy to stimulate use of the automated clearinghouse (ACH) services. Pricing for ACH services was implemented on August 1, 1981, and since that time commercial users of the ACH service have paid $727,000 for services that cost the Reserve Banks $6.2 million. The Board has decided to phase out its price incentives for the ACH service over the next three years. To achieve a smooth transition to a fully costed price, the Board plans to increase ACH prices in stages. When 1982 prices are implemented later this year, they will be set to recover 40 percent of the current full cost of production, including the private sector adjustment factor. The ratio will rise to 60 percent in 1983, 80 percent in 1984, and 100 percent in 1985.

The incentive pricing strategy will contribute to economic efficiency and continued technological innovation which in the long run will result in lower overall costs to society. If fully costed prices were implemented immediately, the price increase would be substantial and could very well cause many users of the ACH service to revert to paper checks. Our pricing strategy recognizes that the ACH service is attractive from the perspective of cost, security, and convenience and that it should be given a chance to grow. At the same time, it recognizes that the private sector should have the opportunity to assess the risks associated with developing competitive ACH systems. By gradually reducing the Federal Reserve's support to the ACH mechanism, the potential negative repercussions of a substantial, one-time, price increase can be avoided and some stimulus for future volume growth will be provided over the short run. In addition, during this time, the private sector will be able to evaluate the costs and benefits of the ACH service and thus decide whether competitive ACH facilities and networks would provide an adequate return on investment.

Senator HAWKINS. Thank you, Mr. Volcker. My time has expired.

Representative RICHMOND. Thank you, Senator Hawkins.

Now for one last question, Congressman Brown.

FURTHER DISCUSSION OF WHY INTEREST RATES HAVEN'T FALLEN

Representative BROWN. Actually I have two questions. You say, Mr. Volcker, that the interest rates are stuck because of inflationary expectations, that those expectations are still high, and not because of the volatility in monetary policy. However, inflation has fallen dramatically for over a year.

Do you mean to tell us that the bankers don't know that inflation has fallen or that there is no competition within the banking community that obliges them to want to go into the marketplace with a slightly lower interest rate than their neighbors? Or are bankers fearful or confused by what your policy will be—that is, the policy of the Fed—and that they are confused by the volatility of the Fed's approach to the money supply.

Mr. VOLCKER. I said the whole set of inflationary expectations and uncertainties was one important factor. It's not the only factor in interest rates. It's the only one that we explored earlier.

Representative BROWN. How important is volatility? Why the sureness of what the Fed is doing versus the unsureness of what the Congress is doing with the fiscal policy versus the unsureness of what the demands will be——

Mr. VOLCKER. There is no formula for separating or weighting these things. If you ask me how important volatility in the money supply itself is as compared to volatility in interest rates, I personally think the volatility in interest rates—the history of very considerable volatility in the past year or two—is more important. I'm just reporting what I read in the press and elsewhere; they say they worry that at some point the Congress might run monetary policy and run it in an inflationary manner. Now how do I answer that question?

I think there's that kind of underlying question that skeptics can raise and obviously they can report on the hearing this morning and say some Congress men or women are interested in that; and if they want to be skeptical they can be skeptical. I don't think you can trace it back to a technical factor alone, or primarily. Those kinds of concerns exist. I think they fundamentally flow out of experience—not experience of Congress tampering with the Federal Reserve, but out of the experience that they've just come through of 10 or 15 years of a confidence-shaking inflation.

Representative BROWN. Let me just suggest that the article in the U.S. News I mentioned suggested that the volatility of the money supply referred to in this chart over here—raises interest rates somewhere between 3 and 6 percent. Now do you think that is not the case?

Mr. VOLCKER. I think that is not the case. There is a school of thought that represents that view. I don't think it's the case.

WHAT HAS CAUSED INTEREST RATE VOLATILITY?

Representative BROWN. And the volatility seems to be much sharper in the last 2 or 3 years than it has been previously because of what reason? I don't quite understand what has changed that volatility? Is it these outside environmental factors?

Mr. VOLCKER. That is an interesting question. I think the outside environmental factors certainly have something to do with it. It certainly is an interesting question—I don't know that it concerns me—as to whether, in the process of assuring that expansion is not excessive and moving more forcibly on those occasions, given the lags and uncertainties involved in the process in the short run, we have introduced more short term volatility than we had before when the Federal Reserve was more passive in providing reserves.

You may have gotten, as a by-product, less month-to-month movement of the money supply; we had quite a lot then.

Representative Brown. You're suggesting it's your tighter control or ——

Mr. VOLCKER. You may have exchanged somewhat tighter control over a period of time for somewhat more volatility in the short run. I don't know if that's the case, but it's a hypothesis.

Representative BROWN. And you feel that the operation of the Fed, the computerization and so forth, provides you with a rapid response system sufficient to address the problems, that there's no question of whether or not the Fed is up to date and that the systems in the private sector are moving faster than yours are?

Mr. VOLCKER. We are relatively up to date on the latest figures. The problem is that what we do today in response to those numbers or otherwise will affect the markets and the money supply over a period of time. If we took action today its primary effect might in fact be a month or 2 or 3 months from now.

Representative BROWN. And you don't know whether it's procyclical or anticyclical?

THE PROBLEM OF LAGS

Mr. VOLCKER. We don't know what other factors will come along during that period to affect it. You get a complicated interaction here. All the problems—I overstate a bit—of economic policy arise from lags and variable lags. It would be easy if you could press a button today and get the response in the market tomorrow, but that's not the way the economy works.

WHY LONG-TERM RATES ARE STICKY DOWNWARD

Representative BROWN. I have one rather precious point for a final question. What effect has the debt duration had on interest rates? In other words, are there so many loans that are long-term in nature that quickly falling inflation rates are not reflected by responses in the interest rate area? Are those commitments of the financial institutions of the country for long-term debts such that they resist the otherwise competitive process of dropping their interest rates when that inflation rate goes down? Does that help account for this large real interest rate that seems to be so unusually excessive at this period of time?

Mr. VOLCKER. I'm not sure I interpret your question correctly. I think what you're suggesting is another way of stating something we've already talked about. Having gone through the history of inflation and interest rate volatility, there is a great amount of caution among lenders who make longer term commitments particularly, because they're afraid that commitment may not look so good next month or 2 months or a quarter from now, even if it looks good for 20 years or 30 years.

Representative BROWN. But they made some of those long-term commitments at very high interest rates.

Mr. VOLCKER. They make them at higher interest rates than they would otherwise make them because of that uncertainty.

Representative BROWN. And they are unwilling to make long-term loans at lower rates, then—is that what you're saying? That they're unwilling to break that interest rate?

Mr. VOLCKER. They're not very eager to be aggressive in the long-term market. The market shows that.

Representative BROWN. On the way down?

Mr. VOLCKER. On the way down, because of some of those factors that I think you're mentioning. I think it's another way of stating what we've already said.

Representative BROWN. Thank you, Representative Richmond.

Representative RICHMOND. Thank you Congressman Brown.

Mr. Chairman, it's always a pleasure to have you here. I learn something every time I listen to you. I wish you luck. Thank you very much. The committee stands adjourned.

[Whereupon, at 12:20 p.m., the committee adjourned, subject to the call of the Chair.]

[The following information was subsequently supplied for the record:]

New York, N.Y., July 12, 1982.

Re Considerations for reducing interest rates.

Congressman HENRY S. REUSS,
Chairman of Joint Economic Committee,
Washington, D.C.

DEAR CONGRESSMAN REUSS: Since you are Chairman of the Joint Economic Committee of Congress, I am submitting to you some ideas for reducing the nation's high interest rates.

Volatility of Interest Rates.—Over the short period, interest rates on government securities experience varying degrees of volatility. However, short term movements of interest rates cannot be relied upon as indicating the longer term outlook of interest rates.

Recently, a seven year Treasury Note was offered to yield 14.62 percent, slightly below the record high of 14.72 percent reached in January. On July 9th, the decline of Money Supply for three consecutive days resulted in the easing of interest rates on a 14⅞ percent issue to 13.86 percent, but immediately regained around half of this loss in rates when Money Supply moved up again.

A possible future offset to lower interest is indicated by the recent vote of the Senate Finance Committee to repeal the law restricting the rate increases on U.S. Savings Bonds—in the past two years, holders of savings bonds have cashed their bonds by $20 billion in excess of new purchases. With the approval of this legislation, the 9 percent rate on 8 year Savings Bonds will be increased to a rate equivalent to 85 percent of the yield on 5 year Treasury Notes—viz. to 11.8 percent.

Government Interest Payments.—For the period 1979-1982, interest payments increased from $53 billions to $114 billion, an increase of 14.3 percent as compared to corresponding increases of 44 percent in government gross debt (to One Trillion Dollars) and a 46 percent rise in total government expenditures.

The foregoing increases in interest payments resulted in a rise of interest as a percent of gross debt from 6.4 percent to 9.4 percent, and a rise in percent of government expenditures from 10.8 percent to 15.0 percent.

The continuing rise of U.S. interest payments has adversely affected not only the U.S. but also the economies of foreign countries. Consequently, the final communique by the Summit Conference held at Versailles of leading nations (U.S. participant) stated: There was an urgency for reducing interest rates, for which objective the industrial nations should cooperate effectively.

Forecasts on Interest Outlook.—The outlook for interest rates hereon is dependent upon forecasts, economic summaries and even short run sentiments. These forecasts vary widely, depending on assumptions, but are essential for establishing guidelines for government policies and programs—also for private industry. Understandably, forecasts, etc. offer no guarantee of being essentially realized.

Commerce Secretary Malcolm Baldrige recently noted economic recovery signs which could promote economic growth and result in lower interest rates.

The latest forecast by the Congressional Budget Office show a declining prospect from previous estimates of a year ago as to Unemployment Rate, real GNP growth and Budget Deficit.

Some private economists indicate that while interst rates will decline over the near term, they will probably resume a rising trend later in the year because of record borrowing by the Treasury to finance the huge deficits and also provide the rising corporate demands as the recession ends.

WILL INTEREST RATES COME DOWN?

This critical and priority problem is briefly discussed from two angles:
(1) Continuing FRB policy, or
(2) Promoting an expansive policy for Money Supply and credit availability.

FRB POLICY

For several years FRB Policy has controlled the Money Supply (M_1) within the range of 2.5 percent to 5 percent. In testimony before the Joint Economic Committee of Congress, Paul Volcker, Chairman of the Federal Reserve Board, stated that his policy was not for rigid control, but with allowance for flexibility.

A shift from FRB policy to an Expansive Policy for Money Supply is proposed for the following reasons.

(1) FBR policy for controlling the Money Supply dces not allow for adequate growth of the economy and for stimulating the urgently needed Capital Investments by private industry.

(2) Current Forecasts and expectations indicate a decline of interest rates for the short term. Doubt remains for the longer term outlook because of the recession in the U.S. and in the world economies. The recent survey of the International Monetary Fund comments on the depressed state of the world economy, including the U.S.

(3) Congress is now considering legislation for a constitutional amendment for a Balanced Budget. A Balanced Budget would be helpful for controlling the Budget and Budget Deficits. Such legislation would likely involve much discussion and debate before final enactment. The legal requirements that the Federal government operate under a mathematical formula poses political and other problems.

(4) FRB policy to date has not achieved a significant decline of high interest rates.

EXPANSIVE POLICY FOR MONEY SUPPLY

A shift from prevailing FRB policy to an expansive policy is recommended for these reasons.

Past results show no direct correlation between the size of the Budget Deficit and Interest Rates.

A more expansive Money Supply might result in additional inflation and rise of interest rates. However, an increase in the Budget Deficit should not be regarded as overly onerous in relation to the current gross government debt of One Trillion Dollars.

It is thus proposed that the Treasury offer Special Revenue Bonds, whose proceeds will be used only for new government capital projects, as defined.

PROVISIONS OF SPECIAL REVENUE BONDS

(a) A minimum maturity of 4 to 5 years, or longer, if necessary.

(b) The requirement that the proceeds from the bonds be used only for new capital projects, legislated by the government—capital projects, as defined.

(c) Interest on these bonds will be governed by the market at offering date.

(d) The offering of these bonds would be apart and distinct from the established procedure of Treasury bond offerings.

For future guidelines, the yearly budget should also show a breakdown by major categories of expenditures for operating expenses of agencies and departments; interest payments on gross debt; the numerous capital projects now provided and research and development projects.

The depressed state of the American steel industry is presently evidenced in the delay of a major modernization project by the U.S. Steel Corp. and by the announcement by Republic Steel of its reduction of capital spending from $280 million to $200 million—these postponements of capital programs reflect limited funds available. It is therefore suggested that the proceeds from the proposed Special Revenue Bonds might be employed for aiding the American steel industry for the purposes of improving its efficiency and competitiveness in world markets.

Patently, the foregoing brief discussion warrants additional amplification.

Cordially yours,

BENJAMIN F. FELDMAN.

[EDITOR'S NOTE: Mr. Feldman is an economist and former vice president of Kuhn, Loeb & Co., New York City.]

A PROPOSAL TO THE SECRETARY OF THE TREASURY AND THE CHAIRMAN OF THE JOINT ECONOMIC COMMITTEE OF THE CONGRESS FOR THE ECONOMIC REVIVAL OF THE UNITED STATES

by
JOHN WINTHROP WRIGHT

I. THE TRUE CAUSES OF THE CURRENT ECONOMIC CRISIS IN THE UNITED STATES.

II. THE MAGNITUDE OF THE CRISIS AND THE CONSEQUENCES WHICH CAN BE EXPECTED UNLESS THERE IS A BASIC CHANGE IN THE GOVERNMENT'S MONETARY AND FISCAL POLICIES.

III. A PROPOSAL FOR PROMPT ECONOMIC REVIVAL THROUGH GOVERNMENTAL ACCORD ON A CONSTRUCTIVE MONETARY, CREDIT AND FISCAL PROGRAM.

IV. AN OUTLINE OF BASIC GOVERNMENTAL REFORMS REQUIRED FOR STABLE ECONOMIC GROWTH.

April 1, 1982

I. THE TRUE CAUSES OF THE CURRENT ECONOMIC CRISIS IN THE UNITED STATES

THE TRUE CAUSES OF THE CURRENT ECONOMIC CRISIS IN THE UNITED STATES ARE (1) A SERIES OF SUSTAINED RECESSIONS DELIBERATELY CAUSED BY DOMESTIC CREDIT RESTRICTIONS, WHICH HAVE SIGNIFICANTLY DEPLETED OUR PRODUCTIVE CAPITAL, (2) A DECADE-LONG FAILURE TO RECOGNIZE THAT DOMESTIC CREDIT RESTRICTIONS CANNOT CURE OR OFFSET EXTERNALLY CAUSED COST-PUSH INFLATION, (3) MONETARY AND CREDIT POLICIES WHICH FAIL TO MAKE TIMELY DISTINCTIONS BETWEEN THE NATION'S NEED FOR THE EXPANSION OR CONTRACTION OF PRODUCTIVE VS CONSUMER CREDIT, AND (4) THE ABSENCE OF ANY EFFECTIVE ACTION BY OUR GOVERNMENT TO CONTROL THE VAST AND UNREGULATED CREATION OF EURODOLLARS AND THE CONSEQUENT EXPANSION OF THE WORLD MONEY SUPPLY OF DOLLARS.

The explanatory chronology which follows details the evolution of these causative developments during the last decade and the fallacy of the common belief that our difficulties are simply the result of excessive monetary growth and governmental extravagance.

The decade's first recession of 1969-70 was caused by an unnecessary prolongation and intensification of the FRB monetary restraints of 1969 and the resulting "Great Credit Crunch" of 1970. Monetary and credit restraint had been applied in 1969 to moderate demands on a VietNam War-burdened production capacity and to hold down a then-unacceptable 5½% annual inflation rate. Excessive monetary and credit restrictions in 1970, however, resulted in recession, excessive unemployment, three years of under-utilization of industrial capacity, and cumulative federal deficits which dissipated $125 billion (1981 dollar equivalent) of the nation's productive capital. These restrictions also indirectly resulted in an extraordinary +42% monetary expansion of the world dollar supply through the addition during the next three years of $64 billion in Eurodollars which were created as dollar loans by and deposits in foreign banks, especially subsidiaries of major U.S. banks which thus avoided domestic FRB restrictions and unprofitable reserve deposit requirements. This, in turn, caused a worldwide boom and an unprecedented +125% three year world-wide commodity price inflation in dollars which made possible a +180% increase in the price of oil by OPEC. By substituting borrowed Eurodollars for the U.S. dollars which would otherwise have been purchased in foreign exchange markets, the growth of Eurodollars also brought about a -14% decline in the relative purchasing power of the U.S. dollar vs a basket of foreign currencies during the same three years.

The decade's second recession of 1974-75 was caused by severe FRB monetary restraints imposed at 1973 year end in the belief that tight domestic money, high interest rates and domestic recession could cure externally caused inflation which had then reached a U.S. domestic annual rate of +7.1% under the influence of the worldwide rise of commodity prices and, by 1974, a quintupling of imported energy costs. This time, the principal consequences were: (1) the greatest U.S. recession since the Great Depression of the 1930's. . . . (2) resulting federal deficits which dissipated $283 billion more (1981 dollar equivalent) of the nation's commercial and industrial capital before GNP recovered to normal capacity utilization and government receipts again covered expenditures. . . . (3) a rise of the prime bank lending rate to a then unprecedented peak of 12% in 1974 and, after only a brief decline to 6½% in 1976, a seemingly inexorable rise to a prohibitive 17% - 20% range at which none but the most profitable enterprises can afford to borrow even to stay in business.

The third major recession is the current one and unfortunately it is still far from ending. It began in mid 1981 and is directly attributable to FRB restrictive open market operations which, in nine months from the second quarter of 1980 through the first quarter of 1981, sharply reduced the Federal Reserve Banks' government bond holdings by -4.4%, and together with new government borrowings drained a total of $92 billion out of the nation's capital markets and caused the prime bank lending rate to rise precipitiously from 11.6% to 19.2%. The absence of a need for anything more than very moderate restraint should have been obvious from the fact that U.S. utilization of manufacturing and material capacity was then well below normal. The national vulnerability to another period of declining productivity, rising unemployment and welfare expenditures, and huge government deficits should have been obvious. At the beginning of this period in the fall of 1980, consumer demand was utilizing less than 80% of manufacturing and major material capacity vs a pre-1970 norm of about 85%. Unemployment was 7½% vs 4.8%, business loans were about -10% below normal, and the money supply (M1) was 15% of GNP vs its 25% average during the 1960's and 19% during the 1970's when velocity increased in concert with interest rates.

During the eleven years since the FRB in 1970 inaugurated the series of excessive domestic credit restrictions which set in motion external inflationary forces in the form of vastly expanding, unregulated Eurodollar credits and money, the world's supply of dollars has grown to more than $1 trillion (excluding interbank balances) of which less than half is made up of U.S. currency and domestic bank deposits. No wonder that world commodity prices *in dollars* have quadrupled, oil prices *in dollars* have multiplied 26 times, and under these external influences, U.S. domestic prices have doubled. Because of inadequate credit availability at reasonable rates, U.S. GNP, however, has only advanced at a retarded +3.0% average annual rate which is 25% slower than its +4.0% average annual rate during the prior decade.

Unaccomodative Federal Reserve monetary and credit policies during most of the period failed to provide American industry with the bank credit needed to finance the working capital requirements of GNP which in constant dollars, although -14% below normal at 1981 year end, had increased by +39% since the beginning of the 1970's vs an increase of only +23% in the aggregate of commercial and industrial business loans and commercial paper.

The spectacular rise in interest rates from an average 5.3% for the bank prime lending rate during the 1960's to recent levels of 17% - 20% raised U.S. product costs substantially and, since the cost of capital, like energy, is a major component of GNP costs, significantly exacerbated domestic cost-push inflation. The FRB was also responsible for a failure to recognize the desirability of moderating inflation by selectively increasing the availability of credit to increase production and supply while limiting its availability for consumer loans. No effort was made to develop a selective policy of variable reserve requirements based on the mix of each bank's loan portfolio, or to manage reserve credit in any other way which would have prevented the rise in consumer debt from 46.7% of GNP in 1970 to a high of 54% in 1980 while debt for productive purposes shrank from 29.0% to 26.2% of GNP.

U.S. government debt rose to nearly $1 trillion from $377 billion in 1969 ($830 billion in constant 1981 dollars). It would, however, actually have declined in constant dollars to only about $309 billion by 1981 if there had been no subsequent recessions, interest had remained at the 1969 rate, and economy-related government expenditures had continued at their 1962-69 average relationships to Gross National Product.

The common belief that our economic difficulties can be entirely, or at least almost entirely, attributed to "too much money chasing too few goods" plus unprecendentedly excessive government spending simply does not jibe with the facts of the last decade. The phrase "too *little* money *producing* too few goods" would, in fact, be more applicable, since at 1981 year end there was actually -5% less money (M1 in constant dollars) than in 1969. The shrinkage is even more dramatic in relation to GNP—from 21.4% in 1969 to 14.7% in 1981's fourth quarter when GNP was only 86% of normal and industrial operations were in the process of declining to a January low of 70% of capacity. Like Mark Twain's comment on hearing reports of his death, statements that excessive domestic money supply is the cause of U.S. inflation are obviously "exaggerated".

There is, of course, no real doubt in anyone's mind that our government has always spent and wasted too much. There is, however, no factual evidence that this was much more than usually the case during the last decade when expenditures which were not related to the economy averaged 17.0% of GNP vs 16.9% during the 1960's* (defense 5.2% vs 8.6%; and all other non-economy-related expense** 11.0% vs 8.5%). The 1969-70 and 1974-75 recessions and their aftermaths, however, contributed to the rise in economy-related transfer payments from 0.9% of GNP in the 1960's* to 1.7% during the 1970's. The greatest percentage increase during the 1970's, however, was in interest payments on the federal debt which rose from an average $11.9 billion per year, only 1.8% of GNP, during the decade of the 1960's when the interest rates averaged less than 4%, to $95.5 billion, 3.3% of GNP, by 1981 when the interest rate on government securities averaged 10%. Altogether the government's expenditures rose only modestly from 19.4% of GNP during the 1960's to 20.9% during the 1970's and *would actually have declined significantly as a percentage of GNP, if the unnecessary recessionary declines of the 1970's had not been deliberately created.*

*: Based on data available 1962-69; **: regular government expense excluding defense, interest, and transfer payments for unemployment compensation and welfare.

II. THE MAGNITUDE OF THE CRISIS AND THE CONSEQUENCES WHICH CAN BE EXPECTED UNLESS THERE IS A BASIC CHANGE IN THE GOVERNMENT'S MONETARY AND FISCAL POLICIES.

THE UNITED STATES AND THE WORLD HAVE NOT FACED AN ECONOMIC CRISIS OF THE PRESENT MAGNITUDE SINCE THE EARLY 1930's WHEN MISTAKEN MONETARY AND FISCAL POLICIES NOT UNLIKE THOSE WHICH HAVE RECENTLY BEEN FOLLOWED UNNECESSARILY PROLONGED AND INTENSIFIED THE POST-1929 RECESSION AND TRANSFORMED IT INTO THE GREAT DEPRESSION. THE CUMULATIVE RESULTS OF THE RESTRICTIVE, RECESSION-PRODUCING POLICIES OF OUR GOVERNMENT SINCE 1969 ARE CLOSE TO ASTOUNDING WHEN COMPARED WITH THOSE WHICH WOULD HAVE BEEN REALIZED IF THE AVERAGES OF THE PRIOR 1960-69 DECADE HAD BEEN MAINTAINED. (See table on next page)

RECENT ACTUAL DATA IN RELATION TO THE PROFORMA RESULTS WHICH WOULD HAVE BEEN REALIZED IN CONSTANT 1981 DOLLARS AT 1960-69 AVERAGE RATIOS AND RATES OF CHANGE.

Economic Data	(-) Deficiency (+) Excess	$ BILLIONS OR % Actual	$ BILLIONS OR % Proforma
Gross National Product (4th Qtr 1981)	-8.4%	$2998	$3274
GNP Annual Growth Rate (From 4th Qtr 1969 to 4th Qtr 1981)	-1.5%	+2.7%	+4.2%
Utilization of Manufacturing Capacity (4th Qtr 1981)	-10.7%	74.8%	85.5%
Unemployment (4th Qtr 1981)	+3.6%	8.4%	4.8%
U.S. Government Debt	+223%	$998	$309*
Consumer Debt Proxy (1981)	+9.8%	$1491	$1358
% of Actual GNP (1981)	+4.4%	49.3%	44.9%
% of Normal GNP (1981)	+1.8%	43.3%	41.5%
Commercial/Industrial Debt Proxy (1981)	-5.8%	$802	$851**
% of Actual GNP (1981)	-1.6%	26.2%	27.8%**
% of Normal GNP (1981)	-1.4%	23.0%	24.4%
Prime Bank Lending Rate (3/26/82)	+11.2%	16.5%	5.3%
Corporate Bond Rate, D-J Bonds (3/26/82)	+8.5%	14.6%	5.1%
Housing Starts (4th Qtr 1981)	-38.1%	871	1407
Business Failures (1982, annual rate to date)	+70.1%	22,870	13,391
Market Valuation of Corporate Equity Capital 3/26/82	-51.1%	111.9†	228.7
Inflation, Annual Rate (4th Qtr 1981)	+7.0%	9.5%	+2.5%
Money Supply (M1) (4th Qtr 1981)	-31.9%	$441	648
% of Actual GNP (4th Qtr 1981)	-6.9%	14.7%	21.6%††
% of Normal GNP (4th Qtr 1981)	-7.6%	13.2%	20.8%

(*): Adjusted total current (1981) Government Debt which would have been realized if there had been no economic recessions since 1969 and interest rates and economy-related government expenditures had continued at their 1969 average relationship to GNP; (**): Based on average 1970-81 ratios; 1960-69 data not available; (†): Index value of S&P 400 Industrial Stock average; (††): Based on ratio of 1969 average money supply to GNP which at 21.6% is lower than 1960-69 average of 24.5% as a result of increased velocity caused by rising interest rates.

IT IS, OF COURSE NOT POSSIBLE TO FORECAST PRECISELY THE CONSEQUENCES WHICH CAN REASONABLY BE EXPECTED IF THERE IS NO BASIC CHANGE IN THE GOVERNMENT'S POLICIES. THIS IS BECAUSE IT SEEMS UNREASONABLE TO BELIEVE THAT OUR DEMOCRATIC SOCIETY WILL PERMIT THE CURRENT RAPID DETERIORATION OF OUR FREE ENTERPRISE SYSTEM TO CONTINUE MUCH LONGER. IT SHOULD BE ENOUGH TO POINT OUT THAT IT IS DIFFICULT TO BELIEVE THAT THERE CAN BE ANYTHING BUT FURTHER DETERIORATION UNTIL A DECISIVE AND CONSTRUCTIVE GOVERNMENT ACCORD ON MONETARY, CREDIT AND FISCAL POLICIES IS REACHED.

It is, however, clear that if such an accord is not reached, the following consequences may reasonably be expected...

1. Businessmen will not contribute to economic revival either by increasing capital spending until a substantial (3% - 5%) decline in bond rates is added to the attraction of faster tax deductions for new plant and equipment, or by increasing inventories for which demand is not rising until the prime bank lending rate declines to 10% or less.

2. Housing starts will not increase significantly until a major decline in interest rates makes the total cost of financing a new home realistically affordable.

3. Consumer demand will not rise significantly until the cost of interest on consumer debt, which in relation to GNP is now at least double the 1960-69 average, is reduced sufficiently to permit consumers to increase or at least to maintain their present debt burden.

4. Federal Government Deficits will continue to grow, not recede, as debt service costs continue to rise. The budget cannot realistically be balanced until the economy recovers to about 85% of capacity, thus increasing revenues and reducing outlays for economy-related transfer payments.

5. Interest rates will, at best, soon stop rising as business grinds towards a halt and requires less current financing; but no significant, lasting declines can be realized until a new constructive monetary and credit policy is adopted by the

Government as a whole and huge Federal Government requirements for deficit financing no longer reduce the nation's sorely depleted store of productive capital.

6. Unless a decisive and basic change is made and constructive government monetary, credit and fiscal policies are adopted by mid-year, it is, in our opinion, highly probable that economic and political realities will combine to prevent realization of the constructive elements of the Administration's program for increasing essential defense expenditures while reducing both unnecessary governmental expenditures and unproductive and burdensome taxes.

III. A PROPOSAL FOR PROMPT ECONOMIC REVIVAL THROUGH GOVERNMENTAL ACCORD ON A CONSTRUCTIVE MONETARY, CREDIT AND FISCAL PROGRAM

THE CURRENT ECONOMIC CRISIS IN THE UNITED STATES, WHICH IS IN FACT, ALSO A WORLD WIDE CRISIS, CAN BE SOLVED ONLY BY A UNIFIED ACCORD OF THE ADMINISTRATION AND THE CONGRESS, THE ONLY BRANCHES OF THE GOVERNMENT WHICH CAN CONSTITUTIONALLY DETERMINE NATIONAL POLICY. ECONOMIC REVIVAL WILL, HOWEVER, ALSO REQUIRE THE WHOLEHEARTED COOPERATION OF THE FEDERAL RESERVE BOARD, WHICH IS A QUASI-INDEPENDENT CREATION OF THE CONGRESS. IN PRACTICE, THE FEDERAL RESERVE EXCERCISES FAR MORE CONTROL OVER THE ECONOMY THAN EITHER THE ADMINISTRATION OR THE CONGRESS AND, THEREFORE, IT IS ESSENTIAL THAT THE FRB BE PERSUADED OR REQUIRED, BY WHATEVER MEANS MAY BE NECESSARY, TO EXERCISE ALL OF ITS POWERS TO ACHIEVE THE NATIONAL OBJECTIVES DECIDED UPON BY THE TWO CONSTITUTIONAL AUTHORITIES.

THE FOLLOWING PROPOSAL IS BELIEVED TO BE REALISTICALLY POSSIBLE OF ACHIEVEMENT AND IS INTENDED TO EFFECT THE PROMPT REVIVAL OF THE U.S. ECONOMY, REVERSE THE DETERIORATION OF THE AMERICAN FREE ENTERPRISE SYSTEM, RETURN U.S. MONETARY, CREDIT AND FISCAL RELATIONSHIPS TO THOSE WHICH, UNTIL THE LAST DECADE, WERE REGARDED AS WITHIN NORMAL DIMENSIONS, AND RESTORE CONSTRUCTIVE AMERICAN LEADERSHIP TO THE WORLD ECONOMY. THE PRINCIPAL MEASURES REQUIRED ARE...

1. GOVERNMENT BORROWING IN U.S. CAPITAL MARKETS WOULD BE SUSPENDED FOR THE REMAINDER OF FISCAL 1982 AND DURING

FISCAL 1983. GOVERNMENT DEFICITS WOULD INSTEAD BE FINANCED BY BORROWING FROM THE FEDERAL RESERVE BANKS IN EXCHANGE FOR GOVERNMENT NOTES WHICH WOULD BE REPAID IN FULL BY AMORTIZATION OVER FIVE FISCAL YEARS BEGINNING IN FISCAL 1984.

2. RELIEF OF THE CAPITAL MARKETS FROM THE TWO HUNDRED BILLION DOLLAR ($200 BILLION) REMAINDER OF THE QUARTER OF A TRILLION DOLLARS ($250 BILLION) WHICH MAY BE REQUIRED IN GOVERNMENT DEFICIT BORROWING DURING THE 1982 AND 1983 FISCAL YEARS WOULD IMMEDIATELY BRING INTEREST RATES DOWN SHARPLY. THE COMBINED RESULT OF (1) THE FACT THAT INTEREST ON ADDITIONAL GOVERNMENT BORROWING FROM THE FEDERAL RESERVE IS SIMPLY A PASS-THROUGH RETURN TO THE GOVERNMENT, AND (2) A REDUCTION OF 3% - 5% FROM AVERAGE INTEREST RATES OF ABOUT 11% NOW PAID ON $1.03 TRILLION IN GOVERNMENT DEBT OUTSTANDING WOULD ITSELF REDUCE EXPECTED DEFICITS BY ABOUT $5 BILLION DURING THE REMAINDER OF THIS FISCAL YEAR BUT BY ABOUT $40 BILLION NEXT YEAR AS OUTSTANDING DEBT IS REFINANCED AT LOWER INTEREST RATES. THE ANNUAL SAVINGS IN INTEREST WOULD EVENTUALLY BE APPROXIMATELY $58 BILLION DOLLARS.

3. THE GOVERNMENT DEBT HELD BY THE FEDERAL RESERVE WOULD INCREASE FROM $127 BILLION CURRENTLY TO ABOUT $175 BILLION BY 1982 YEAR END AND, AT WORST, TO A MAXIMUM OF ABOUT $215 BILLION AT FISCAL 1983 YEAR END SINCE THE 1983 FEDERAL DEFICIT WOULD BE REDUCED TO NOT MORE THAN $40 BILLION AS A RESULT OF SAVINGS OF ABOUT $40 BILLION IN DEBT INTEREST AND $20 BILLION THROUGH THE REDUCTION OF ECONOMY-RELATED TRANSFER PAYMENTS, PLUS THE HIGHER TAX REVENUES WHICH WOULD ACCOMPANY MUCH FASTER ECONOMIC RECOVERY. *MAXIMUM FRB HOLDINGS OF GOVERNMENT DEBT AT*

FISCAL 1983 YEAR END WOULD AMOUNT TO ONLY 5.6% OF NORMAL 1983 GNP VS CURRENT BELOW-NORMAL FRB HOLDINGS OF 4.3% OF GNP (ONLY 3.6% OF "NORMAL" GNP) BUT WOULD BE NO HIGHER THAN THE AVERAGE 5.6% RATIO OF FRB GOVERNMENT DEBT HOLDINGS TO GNP DURING THE 1960's.

4. THE FEDERAL RESERVE, ALTHOUGH UTILIZING OPEN MARKET OPERATIONS TO THE MAXIMUM POSSIBLE EXTENT TO REACQUIRE HIGHER COUPON ISSUES, WOULD CEASE TO RELY UPON OPEN MARKET OPERATIONS AS ITS PRINCIPAL METHOD OF REGULATING MONEY AND CREDIT AND INSTEAD WOULD REVIVE ACTIVE EMPLOYMENT OF BANK RESERVE REQUIREMENTS.

IV AN OUTLINE OF BASIC GOVERNMENTAL REFORMS REQUIRED FOR STABLE ECONOMIC GROWTH

SUSTAINED REVIVAL OF THE U.S. ECONOMY AND RESTORATION OF CONSTRUCTIVE U.S. WORLD LEADERSHIP OBVIOUSLY REQUIRES MAJOR REFORMS IN THE EXERCISE OF THE GOVERNMENT'S RESPONSIBILITY FOR OVERSIGHT OF AMERICAN FREE ENTERPRISE CAPITALISM. THE FOLLOWING SUMMARIZES SOME MEASURES WHICH WILL BE REQUIRED OR ARE DESIRABLE TO ASSURE A RECESSION-FREE, STABLE, STEADILY EXPANDING ECONOMY IN WHICH THE PRODUCTS AND SERVICES OF THE ECONOMY AND THE COSTS OF GOVERNMENT ARE BOTH EQUITABLY DISTRIBUTED.

1. **The Management of the U.S. economy should be "demonitized".** Measurement of cyclical economic variations from normal should make use of such indicators as unemployment and percent utilization of manufacturing and material capacity rather than various, arbitrary "money supply targets" which in a modern economic society have become so amorphous that they no longer distinguish adequately between demand-stimulating ready money and supply-producing funds available for or committed to productive investment. If the relationship between the demand and supply of goods and services is adequately controlled by other means (see paragraph 2 below), the stabilization of monetary growth will follow naturally.

2. **Selective management of bank reserve credit** should replace the manipulation of money supply and interest rates by FRB open market operations. Restraint or stimulation of the economy should be accomplished directly by selective decrease or increase of the availability of bank credit through FRB reserve requirements. These should distinguish between credit for consumer purposes and credit for productive and other purposes. Variable reserve requirements should be applied to all banks and direct lending institutions, and should be based on the

portfolio asset mix of and changes in the loan portfolios of each individual bank and lending institution, instead of being uniformly and indiscriminately applied to all member banks.

3. **Regulatory control of Eurodollar and Xeno-currency creation by all foreign banks including the foreign subsidiaries of U.S. banks should be achieved by international agreement.** Since each nation is the sovereign of its own currency, any nation whose banks create or accept bank deposits in a foreign currency should require its banks to comply with the reserve deposit requirements of the central bank of the sovereign nation. Universal compliance would be assured if the United States and cooperating nations limited acceptance of foreign bank drafts to complying banks. The result would, for the first time, make possible effective control of credit expansion on a worldwide basis as well as domestically by each nation.

4. **A determined effort should be made to establish an inflation-proof international currency, at first primarily for international central bank settlements, but thereafter soon extended to international commercial transactions as well. This could realistically be achieved by transforming today's "SDRs" (Special Drawing Rights) of the International Monetary Fund into** "Stable Dollar Reserves" which would maintain their international purchasing power against a basket of currencies. Each nation's contribution of its currency in exchange for "SDRs" would be progressively adjusted upwards (or downwards) through prorata additions (or withdrawals) as the purchasing power of its own currency declines (or advances). The result would be (1) a strong deterrant to inflationary policies by participating nations which exchange some of their currency for SDRs reserves, (2) a substantial decline in the need for Eurodollars and Xeno-currencies for world trade and liquidity, (3) a continuing demand for the expansion of SDRs and (4) their widespread use in low interest loans to under developed nations.

5. **The U.S. Budget should be divided into two separate and distinct segments: (1) The Operating Budget and (2) The Capital Budget.** The former should contain all of the elements of the present budget except expenditures reserved to

the Capital Budget for bona-fide, productive capital use such as roads, bridges, harbors, waterways, dams and other installations which contribute to the creation and growth of Gross National Product. Capital expenditures for public education, recreation etc. and for governmental use might or might not be included in the Capital Budget.

A Capital Budget would greatly clarify the cost, management, and evaluation of Governmental operating expense as distinguished from expenditures for national objectives not related to ongoing governmental requirements.

6. **A Value-Added Tax should be adopted to reduce tax losses on transactions in an "underground economy".** These losses are now commonly but unverifiably believed to be as large as 25% - 33% of the collected income tax revenues. Value-Added Tax is much more difficult to avoid or evade and the reduced burden of income taxes which would follow its adoption would provide less incentive for tax evasion and could be sufficiently progressive to achieve political and social objectives for equitable public distribution of the costs of government.

7. **The relative amounts of individual retirement income derived from social security benefits vs voluntary tax-deferred retirement programs should be shifted progressively and significantly towards the latter.** The former is essentially a pay-as-you-go tax burden on all workers, whereas the latter accumulates capital which is utilized in productive equity and fixed income investments. Eventually, social security benefits should provide comfortable sustenance only for (1) those who, in the past, have made substantial social security contributions, (2) the handicapped, and (3) those who, because of disability, have been unable to accumulate other retirement benefits. Only minimal sustenance should be provided through social security for those who are able to work and participate in corporate, institutional, and voluntary tax-deferred retirement programs. The result of such a change of emphasis would be a further substantial reduction in the worker's tax burden and a corresponding acceleration of capital formation and national productivity.

the Economy and the Budget - Part 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
$Bil Fiscal Years	Gross National Product			Adjusted "Normal" (A)		Total Government Debt				Adjusted (B)		Federal Surplus (+)/ Deficit (-)				Adjusted (C)	
	Current$/ (†)constant	% change	% of "norm"	Current$/ (†)constant	% change	Current$/ (†)constant	% change	Percent of ACTUAL GNP	"NORM" GNP	Current$/ (†)constant	% of "NORM" GNP	current$/ (†)constant		Percent of ACTUAL GNP	"NORM" GNP	Current($)/ (†)constant	% of "NORM" GNP
1977	1864.0	+13.5	91.3	2041.0	+9.2	674.0	+11.6	36.2	33.0	354.7	17.1	-45.0		-2.4	-2.2	+23.0	1.1
	2707.2	+6.3		2964.3	+3.6	973.9	+5.9			506.9		-65.4				+33.4	
1978	2085.3	+11.9	92.5	2254.6	+10.5	744.4	+10.4	35.7	33.0	354.4	15.7	-48.8		-2.3	-2.2	+16.2	0.7
	2839.5	+4.9		3070.1	+3.6	1013.6	+3.5			482.3		-66.5				+22.1	
1979	2357.8	+13.1	92.9	2536.9	+12.5	804.4	+8.1	34.1	31.7	351.6	13.9	-27.3		-1.2	-1.1	+35.5	1.4
	2955.2	+4.1		3178.7	+3.6	1008.2	-0.5			440.7		-34.2				+44.5	
1980	2567.5	+8.9	90.0	2852.1	+12.4	873.5	+8.6	34.0	30.6	325.4	11.4	-59.0		-2.3	-2.1	+36.3	1.3
	2964.6	+0.3		3293.2	+3.6	1008.6	0			375.7		-68.1				+41.9	
1981	2858.6	+11.3	88.4	3232.6	+13.3	966.0	+10.6	33.8	29.9	309.8	9.6	-57.9		-2.0	-1.8	+50.2	1.6
	3016.1	+1.7		3410.8	+3.6	1019.2	+1.1			326.9		-61.1				+53.0	
5 year average 1977-81	2346.6	+11.7	91.0	2583.4	+11.6	812.5	+9.9	34.8	31.6	338.0	13.5	-47.6		-2.0	-1.9	+32.2	1.2
	2896.5	+3.5		3183.6	+3.6	1005.7	+2.0			426.5		-59.1				+39.0	
12 year average 1970-81	1718.4	+9.8	92.3	1875.3	+10.6	627.9	+8.5	35.5	31.6	344.1	21.2	-34.5		-1.9	-1.8	+19.0	0.9
	2594.6	+2.8		2819.8	+3.6	913.7	+1.6			568.9		-50.6				+25.8	
10 year average 1960-69	666.1	+6.8	93.1	711.7	+6.1	312.2	+2.3	48.1	44.6	NC	NC	-5.7		-0.8	-0.8	NC	NC
	1779.3	+4.5		1905.0	+3.6	841.4	-0.1			NC		-15.1				NC	

Notes: (A): Adjusted "Normal" GNP is based on trend-adjusted 1960-69 average updated at its annual average post-war growth rate of +3.6%

(B) Adjusted to what Federal Gov't Debt would have totaled if the deficits had been adjusted on the basis of the 1969 rates of interest and the corresponding changes which could reasonably have been expected in receipts and expenditures.

(C): Adjusted to show what Federal surplus/deficit could reasonably have been expected if receipts and expenditures had been based on 1969 rates of interest and normal GNP growth.

(†): Constant 4th quarter 1981 dollars.

the Economy and the Budget- Part 1

	19 20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
$BIL FISCAL YEARS	Federal Surplus(+)/Deficit(-)			Adjusted(C)		Government Receipts				Adjusted (D)		Goverment Outlays				Adjusted(E)	
	current$/ (+)constant	Percent of actual GNP	Percent of "norm" GNP	current$/ (+)constant	% of "norm" GNP	current$/ (+)constant	% chg	Percent of actual GNP	Percent of "norm" GNP	current$/ (+)constant	% of "norm" GNP	current$/ (+)constant	% chg	Percent of actual GNP	Percent of "norm" GNP	current$/ (+)constant	% of "norm" GNP
1977	-45.0 -65.4	-2.4	-2.2	+23.0 +33.4	1.1	357.8 519.7	+19.3 +11.7	19.2	17.8	379.6 551.3	18.6	402.7 584.9	+10.1 +3.2	21.6	19.7	356.6 519.9	17.5
1978	-48.8 -66.5	-2.3	-2.2	+16.2 +22.1	0.7	402.0 547.4	+12.4 +5.3	19.3	17.8	419.3 571.0	18.6	450.8 613.8	+11.9 +4.9	21.6	20.0	403.1 548.9	17.9
1979	-27.3 -34.2	-1.2	-1.1	+35.5 +44.5	1.4	465.9 583.9	+15.9 +6.7	19.9	18.4	471.8 591.4	18.6	493.2 618.2	+9.4 +0.7	21.1	19.4	436.3 546.8	17.2
1980	-59.0 -68.1	-2.3	-2.1	+36.3 +41.9	1.3	520.1 600.5	+11.6 +2.8	20.1	18.2	530.5 612.5	18.6	579.0 668.5	+17.4 +8.1	22.3	20.3	494.2 570.6	17.3
1981	-57.9 -61.1	-2.0	-1.8	+50.2 +53.0	1.6	603.6 636.9	+16.1 +6.1	21.1	18.7	601.3 634.4	18.6	660.6 697.0	+14.1 +4.3	23.1	20.4	551.1 581.5	17.0
5 year Average 1977-81	-47.6 -59.1	-2.0	-1.9	+32.2 +39.0	1.2	469.9 577.7	+15.1 +6.2	19.9	18.1	480.5 592.1	18.6	517.3 636.5	+12.6 +4.2	21.9	20.0	448.3 553.5	17.4
12 year Average 1970-81	-34.5 -50.6	-1.9	-1.8	+19.0 +25.8	0.9	334.9 501.6	+10.4 +3.2	19.3	17.8	348.8 524.5	18.6	369.3 552.0	+11.3 +4.0	21.2	19.6	281.2 498.9	17.8
10 year Average 1960-69	-5.7 -15.1	-0.8	-0.8	NC NC	NC	124.5 331.8	+9.2 +6.8	18.6	17.3	NC NC	NC	130.1 346.8	+7.4 +5.0	19.4	18.1	NC NC	NC

Notes:

(D): Adjusted to show what receipts would have been at 1960-69 ratio of receipts to GNP and if GNP had been normal.

(E): Adjusted for changes in outlays for interest on Gov't Debt and for economy related expenditures for unemployment and welfare which could reasonably have been expected at 1969 interest rates and if GNP Growth had been "normal"

(+): Constant 4th quarter 1981 dollars.

the Economy and the Budget - Part 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
$Bil	Gross National Product			Adjusted "Normal" (A)		Total Government Debt				Adjusted (B)		Federal Surplus (+)/ Deficit (-)				Adjusted (C)	
Fiscal Years	Current$/ ($)constant	% change	% of "norm"	Current$/ ($)constant	% change	Current$/ ($)constant	% change	Percent of ACTUAL GNP	"NORM" GNP	Current$/ ($)constant	% of "norm" GNP	Current$/ ($)constant		Percent of ACTUAL GNP	"NORM" GNP	Current($)/ ($)constant	% of "NORM" GNP
1969	911.0 2157.9	+9.2 +4.3	97.2	937.0 2219.4	+8.4 +3.6	355.1 841.1	+3.9 -0.8	39.0	37.9	NC NC	NC	3.2 7.6		0.4	0.3	NC NC	NC
1970	968.9 2171.7	+6.4 +0.6	94.5	1025.5 2298.5	+9.4 +3.6	367.2 823.0	+3.4 -2.2	37.9	35.8	368.5 826.0	35.9	-2.8 -6.3		-0.3	-0.3	-4.1 -9.2	-0.4
1971	1032.7 2204.8	+6.6 +1.5	92.6	1115.1 2380.7	+8.7 +3.6	388.6 829.7	+5.8 +0.8	37.6	34.9	362.3 773.5	32.5	-23.0 -49.1		-2.2	-2.1	+4.6 +9.8	0.4
1972	1126.6 2300.3	+9.1 +4.2	93.3	1207.6 2465.7	+8.3 +3.6	421.9 852.5	+8.6 +3.8	37.5	34.9	349.2 713.0	28.9	-23.2 -47.7		-2.1	-2.0	+3.0 +6.1	0.2
1973	1255.2 2454.6	+11.4 +6.7	96.1	1305.9 2553.7	+8.1 +3.6	449.2 878.4	+6.5 +2.0	35.8	34.4	354.5 693.2	27.1	-14.3 -28.0		-1.1	-1.1	+7.7 +15.1	0.6
1974	1381.5 2518.8	+10.1 +2.6	95.2	1450.7 2644.9	+11.1 +3.6	469.4 855.8	+4.5 -2.6	34.0	32.4	351.7 641.2	24.2	-3.5 -6.4		-0.3	-0.2	+19.5 +35.6	1.3
1975	1480.5 2459.4	+7.2 -2.6	89.6	1652.4 2739.3	+13.9 +3.6	504.2 835.9	+7.4 -2.3	34.1	30.5	327.4 542.8	19.8	-43.6 -72.3		-2.9	-2.6	+15.5 +25.7	0.9
1976	1642.7 2547.6	+11.0 +3.8	89.8	1829.4 2837.1	+10.7 +3.6	587.8 911.6	+16.6 +9.1	35.8	32.1	325.1 504.2	17.8	-65.6 -101.7		-4.0	-3.6	+203 +31.5	1.1
1976 TQ	1729.0 2607.1	+9.5 +4.3	89.9	1923.2 2599.9	+8.7 +3.6	634.7 957.0	+9.5 +4.3	36.7	33.0	354.7 534.8	12.2	-13.3 -20.1		-3.1	-2.8	+4.0 +6.0	0.1

the Economy and the Budget - Part 1

	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
$BIL	Federal Surplus (+)/Deficit (-)				Adjusted (C)		Government Receipts				Adjusted (D)		Government Outlays				Adjusted (E)	
Fiscal Year	current $/ ($)constant		Percent of actual GNP	Percent of "norm" GNP	current $/ ($)constant	% of "norm" GNP	current $/ ($)constant	% chg	Percent of actual GNP	Percent of "norm" GNP	current $/ ($)constant	% of "norm" GNP	current $/ ($)constant	% chg	Percent of actual GNP	Percent of "norm" GNP	current $/ ($)constant	% of "norm" GNP
1969	3.2 7.6		0.4	0.3	NC NC	NC	187.8 444.9	+22.2 +16.7	20.6	20.0	NC NC	NC	184.5 437.0	+3.2 -1.5	20.3	19.7	NC NC	NC
1970	-2.8 -6.3		-0.3	-0.3	-4.1 -9.2	-0.4	193.7 434.2	+3.1 -2.4	20.0	18.9	190.8 427.6	18.6	196.6 440.7	+6.6 +0.8	20.3	19.2	196.9 436.8	19.0
1971	-23.0 -49.1		-2.2	-2.1	+4.6 +9.8	0.4	188.4 402.2	-2.7 -7.4	18.2	16.9	207.4 442.8	18.6	211.4 451.3	+7.5 +2.4	20.5	19.0	202.8 433.0	18.2
1972	-23.2 -47.7		-2.1	-2.0	+3.0 +6.1	0.2	208.6 425.9	+10.7 +5.9	18.5	17.9	224.6 458.6	18.6	231.9 473.5	+9.7 +4.9	20.6	19.9	221.6 452.5	18.4
1973	-14.3 -28.0		-1.1	-1.1	+7.7 +15.1	0.6	232.2 454.1	+11.3 +6.6	18.5	17.8	242.9 475.0	18.6	246.5 482.0	+6.3 +1.8	19.6	18.9	235.2 459.9	18.0
1974	-3.5 -6.4		-0.3	-0.2	+19.5 +35.6	1.3	264.9 483.0	+14.1 +6.4	19.2	18.3	269.8 492.0	18.6	268.4 489.4	+8.9 +1.5	19.4	18.5	250.3 456.4	17.3
1975	-43.6 -72.3		-2.9	-2.6	+15.5 +25.7	0.9	281.0 465.9	+6.1 -3.5	19.0	17.0	307.3 509.5	18.6	324.6 538.1	+20.9 +10.0	21.9	19.6	291.8 483.8	17.7
1976	-65.6 -101.7		-4.0	-3.6	+20.3 +31.5	1.1	300.0 465.3	+6.8 -0.1	18.3	16.4	340.3 527.7	18.6	365.6 567.0	+12.6 +5.4	22.3	20.0	320.0 496.3	17.5
1976 TQ	-13.3 -20.1		-3.1	-2.8	+4.0 +6.0	0.1	81.2 122.4	NC	18.8	16.9	89.4 134.8	18.6	94.5 142.5	NC	21.9	19.7	85.4 356.6	2.9

the Economy and the Budget- Part 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
$Bil Fiscal Years	Gross National Product			Adjusted "Normal" (A)		Total Government Debt				Adjusted (B)		Federal Surplus (+)/ Deficit (-)				Adjusted (C)	
	Current $/ (t)constant	% change	% of "norm"	Current $/ (t)constant	% change	Current $/ (t)constant	% change	Percent of ACTUAL GNP	"NORM" GNP	Current $/ (t)constant	% of "norm" GNP	Current $/ (t)constant		Percent of ACTUAL GNP	"NORM" GNP	Current $/ (t)constant	% of "NORM" GNP
1960	499.3	+5.8	90.5	551.7	+5.7	286.4	+1.4	57.4	51.9	NC	NC	0.3		0.1	-0.1	NC	NC
	1465.0	+3.6		1618.6	+3.6	840.3	-0.7					0.9					
1961	510.1	+2.2	88.2	578.1	+4.8	286.3	0.0	56.1	49.5	↓	↓	-3.4		-0.7	-0.1	↓	↓
	1479.3	+1.0		1676.4	+3.6	830.3	-1.2					-9.9					
1962	546.9	+7.2	90.1	606.9	+5.0	293.5	+2.5	53.7	48.4			-7.1		-1.3	-1.2		
	1564.5	+5.8		1736.2	+3.6	839.6	+1.1					-20.3					
1963	579.0	+5.9	90.6	639.4	+5.4	299.8	+2.1	51.8	46.9			-4.8		-0.8	-0.8		
	1628.4	+4.1		1798.2	+3.6	843.2	+0.4					-13.5					
1964	618.4	+6.8	92.0	672.2	+5.1	305.9	+2.0	49.5	45.5			-5.9		-1.0	-0.9		
	1713.3	+5.2		1862.4	+3.6	847.5	+0.5					-16.3					
1965	660.5	+6.8	93.2	708.7	+5.4	313.5	+2.5	47.5	44.2			-1.6		-0.2	-0.2		
	1797.6	+4.9		1928.9	+3.6	853.2	+0.7					-4.4					
1966	725.5	+9.8	96.3	753.5	+6.3	315.9	+0.8	43.5	41.9			-3.8		-0.5	-0.5		
	1923.5	+7.0		1997.7	+3.6	837.5	-1.8					-10.1					
1967	776.2	+7.0	96.4	805.2	+6.9	324.2	+2.6	41.8	40.3			-8.7		-1.1	-1.1		
	1994.5	+3.7		2069.0	+3.6	833.0	-0.5					-22.4					
1968	834.4	+7.5	96.6	864.0	+7.3	341.8	+5.4	41.0	39.6			-25.2		-3.1	-2.9		
	2069.6	+3.8		2142.9	+3.6	847.8	+1.8					-62.5					
1969	911.0	+9.2	97.2	937.0	+8.4	355.1	+3.9	39.0	37.9			3.2		0.4	0.3		
	2157.9	+4.3		2219.4	+3.6	841.1	-0.8					7.6					

the Economy and the Budget. Part 1

	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
$BIL	Federal Surplus (+)/Deficit (-)				Adjusted (C)		Government Receipts				Adjusted (D)		Government Outlays				Adjusted (E)	
Fiscal Year	current$/ (1)constant		Percent of actual GNP	Percent of "norm" GNP	current$/ (1)constant	% of "norm" GNP	current$/ (1)constant	% chg	Percent of actual GNP	Percent of "norm" GNP	current$/ (1)constant	% of "norm" GNP	current$/ (1)constant	% chg	Percent of actual GNP	Percent of "norm" GNP	current$/ (1)constant	% of "norm" GNP
1960	0.3 0.9		0.1	-0.1	NC	NC	92.5 271.4	+16.8 +15.7	18.5	16.8	NC	NC	92.2 270.5	+0.1 -0.8	18.5	16.7	NC	NC
1961	-3.4 -9.9		-0.7	-0.1			94.4 273.8	+2.1 +0.9	18.5	16.3			97.8 283.6	+6.1 +4.8	19.2	16.9		
1962	-7.1 -20.3		-1.3	-1.2			99.7 285.2	+5.6 +4.2	18.2	16.4			106.8 305.5	+9.2 +7.7	19.5	17.6		
1963	-4.8 -13.5		-0.8	-0.8			106.6 299.8	+6.9 +5.1	18.4	16.7			111.3 313.0	+4.2 +2.5	19.2	17.4		
1964	-5.9 -16.3		-1.0	-0.9			112.7 312.2	+5.7 +4.1	18.2	16.8			118.6 328.6	+6.6 +5.0	19.2	17.6		
1965	-1.6 -4.4		-0.2	-0.2			116.8 317.9	+3.6 +1.8	17.7	16.5			118.4 322.2	-0.2 -1.9	179	16.7		
1966	-3.8 -10.1		-0.5	-0.5			130.9 347.0	+12.1 +9.2	18.0	17.4			134.7 357.1	+13.8 +10.8	18.6	17.9		
1967	-8.7 -22.4		-1.1	-1.1			149.6 384.4	+14.3 +10.8	19.3	18.6			158.3 406.8	+17.5 +13.9	20.4	19.7		
1968	-25.2 -62.5		-3.1	-2.9			153.7 381.2	+2.7 -0.8	18.4	17.8			178.8 443.5	+13.0 +9.0	21.4	20.7		
1969	3.2 7.6		0.4	0.3			187.8 444.9	+22.2 +16.7	20.6	20.0			184.5 437.0	+3.2 -1.5	20.3	19.7		

the Economy and the Budget. Part 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14
$ Bil	Interest Rate on Federal Debt		Interest Expense on Government Debt					Adjusted (F)		Adjusted (G)		Interest Receipts Adj.	
					Percent of								
Fiscal Years	Current	10 year Average	Current $/ (+) Constant	% Chg.	Total Expense	Actual GNP	"Norm" GNP	Current $/ (+) Constant	% of "Norm" GNP	Current $/ (+) Constant	% of "Norm" GNP	Current $/ (+) Constant	Current $/ (+) Constant
1977	6.22	5.63	41.9 60.9	+13.1 +5.9	10.4	2.2	2.1	32.6 47.3	1.6	17.0 24.7	0.8	9.3	13.5
1978	6.54	5.80	48.7 66.3	+16.7 +8.9	10.8	2.3	2.2	36.0 49.0	1.6	18.6 25.3	0.8	9.8	13.3
1979	7.43	6.01	59.8 75.0	+22.9 +13.1	12.1	2.6	2.4	39.0 48.9	1.5	19.0 23.8	0.7	11.2	14.0
1980	8.56	6.55	74.8 86.4	+25.0 +15.2	12.9	2.9	2.6	42.3 48.8	1.5	18.5 21.4	0.6	12.6	14.5
1981	9.89	7.00	95.5 100.8	+27.7 +16.7	14.5	3.3	2.9	46.7 49.3	1.4	18.8 19.8	0.6	13.1	13.8
5 year AVERAGE 1977-81	7.63	N.C.	64.1 77.9	+17.0 +10.1	12.1	2.7	2.4	39.3 48.7	1.5	18.4 23.0	0.7	11.2	13.8
12 year AVERAGE 1970-81	6.59	N.C.	42.2 61.3	+13.8 +7.1	10.9	2.3	2.1	29.9 45.4	1.6	18.2 29.7	1.1	8.4	12.7
10 year AVERAGE 1960-69	3.76	N.C.	11.9 32.1	+6.3 +3.8	9.2	1.8	1.7	N.C.	-	N.C.	-	N.C.	-

Notes:

(F): Adjusted to show what the cost of interest on Government debt would have been if interest rates were the same as their 1969 average but were applied to total debt actually outstanding during the current year.

(G): Adjusted to show what the cost of interest on Government debt would have been if (1) interest rates were the same as their 1969 average, but (2) were applied to the smaller debt which would have been required to finance the smaller adjusted deficits which would have resulted had GNP Growth been stabilized at normal since 1964.

(+): Constant 4th quarter 1981 Dollars.

the Economy and the Budget - Part 2

	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
$B.1	Economy Related Transfer Payments						Adjusted (#)		Defense Expenditures					All Gov't Expenditures Excluding Interest, Economy Related Transfer Payments & Def. Exp				
Fiscal Year			Percent of								Percent of					Percent		
	Current $/ (+) Constant	% Chg	Total Expend.	Actual GNP		"Norm" GNP	Current $/ (+) Constant	% of "Norm" GNP	Cur $/ (+) Const.	% Chg	Total Expend.	Act GNP	"Norm" GNP	Cur $/ (+) Const.	% Chg	Total Expend.	Act. GNP	"Norm" GNP
1977	39.8 57.8	-5.7 -11.6	9.9	2.1		1.9	18.6 27.0	0.9	97.5 141.6	+9.1 +2.2	24.2	5.2	4.8	223.5 324.6	+13.5 +6.3	55.5	12.0	11.0
1978	38.3 52.2	-3.8 -9.7	8.5	1.8		1.7	20.7 28.2	0.9	105.2 143.2	+7.9 +1.1	23.3	5.0	4.7	258.6 352.1	+15.7 +8.5	57.3	12.4	11.5
1979	39.3 49.3	+2.6 -5.6	8.0	1.7		1.6	23.2 29.1	0.9	117.7 147.5	+11.9 +3.0	23.9	5.0	4.6	276.4 346.4	+6.9 -1.6	56.0	11.8	10.9
1980	54.7 63.2	+39.2 +28.2	9.4	2.1		1.9	26.2 30.3	0.9	135.9 156.9	+15.5 +6.4	23.4	5.2	4.8	313.6 362.1	+13.5 +4.5	54.2	12.1	11.0
1981	62.5 65.9	+14.3 +4.3	9.5	2.2		1.9	29.7 31.3	0.9	159.8 168.6	+17.6 +7.5	24.2	5.6	4.9	342.8 361.7	+9.3 -0.1	51.9	12.0	10.6
5 year Average 1977-81	46.9 67.5	+8.2 +0.2	9.1	2.0		1.8	23.7 29.2	0.9	123.2 151.6	+12.3 +4.0	23.8	5.2	4.8	253.0 349.4	+11.7 +3.4	55.0	12.1	11.0
12 year Average 1970-81	32.3 47.2	+17.0 +10.0	8.4	1.8		1.6	17.2 25.9	0.9	99.7 151.7	+6.0 -0.9	28.2	5.9	5.5	196.9 291.9	+12.9 +5.6	52.5	11.2	8.8
10 year Average 1960-69	6.4* 16.9*	+1.3 -1.2	4.8*	0.9*		0.8*	N.C	-	57.1 152.5	+5.8 +3.6	44.2	8.6	8.0	72.6* 192.0*	+8.4 +5.9	52.0*	10.2*	9.6*

Notes:

(#): Adjusted to show what the cost of transfer payment for welfare and unemployment, which are closely related to the state of the economy, would have been if (1) their average rate to GNP were the same as its average during 1962-69 and (2) GNP had been "normal".

*: 1962-69 average

(+): Constant 4th quarter 1981 dollars

the Economy and the Budget. Part 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14
$ B.l	Interest Rate on Federal Debt		Interest Expense on Government Debt					Adjusted (F)		Adjusted (G)		Interest Receipts Adj	
					Percent of								
Fiscal Years	Current	10 year Average	Current $/ (1) Constant	% Chg	Total Expense	Actual GNP	"Norm" GNP	Current $/ (1) Constant	% of "Norm" GNP	Current $/ (1) Constant	% of "Norm" GNP	Current $/ (1) Constant	Current $/ (1) Constant
1969	4.84	3.92	17.2 40.7	+12.4 -4.7	9.3	1.9	1.8	NC NC	-	NC NC	-	N.C. N.C.	- -
1970	5.31	4.14	19.5 43.7	+13.6 +7.4	9.9	2.0	1.9	17.8 39.9	1.7	17.8 39.9	1.7	4.6	10.3
1971	5.43	4.36	21.1 45.0	+8.0 +3.0	10.0	2.0	1.8	18.8 40.1	1.7	17.7 37.8	1.6	5.6	12.0
1972	5.21	4.55	22.0 44.9	+4.2 -0.2	9.5	2.0	1.8	20.4 41.7	1.7	18.7 38.2	1.5	6.0	12.3
1973	5.39	4.74	24.2 47.3	+10.0 +5.3	9.8	1.9	1.9	21.8 42.6	1.7	17.5 34.2	1.3	6.2	12.1
1974	6.24	4.99	29.3 53.4	+21.3 +12.9	10.9	2.1	2.0	22.7 41.4	1.6	17.6 32.1	1.2	6.1	11.1
1975	6.49	5.25	32.7 54.2	+11.4 +1.5	10.1	2.2	2.0	24.4 40.5	1.5	16.6 27.5	1.0	7.1	11.8
1976	6.31	5.45	37.1 57.5	+13.5 +6.1	10.1	2.3	2.0	28.5 44.2	1.6	16.7 25.9	0.9	8.0	12.4
1976 TQ	5.16	5.45	8.1 12.2	- -	8.6	1.9	1.7	7.6 11.5	0.4	3.9 5.9	0.2	1.1	1.7

the Economy and the Budget - Part 2

	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
$Bil	Economy Related Transfer Payments						Adjusted (H)		Defense Expenditures					All Gov't Expenditures Excluding Interest, Economy Related Transfer Payments & Def. Exp				
Fiscal Year	Current $/ (1) Constant	% Chg	Percent of				Current $/ (1) Constant	% of "Norm" GNP	Cur $/ (1) Const.	% Chg	Percent of			Cur. $/ (1) Const.	% Chg.	Percent		
			Total Expend.	Actual GNP		"Norm" GNP					Total Expend.	Act. GNP	"Norm" GNP			Total Expend.	Act. GNP	"Norm" GNP
1969	7.3 17.2	+12.3 +6.8	4.0	0.8		0.7	N.C.	-	79.4 188.1	+0.8 -3.7	43.0	8.7	8.5	80.6 190.9	+3.1 -1.6	43.7	8.8	8.6
1970	9.1 20.4	+24.7 +18.6	4.6	0.9		0.8	9.1 20.4	0.9	78.6 176.2	-1.0 -6.3	40.0	8.1	7.7	89.4 200.4	+10.9 +5.0	45.5	9.2	8.7
1971	14.7 31.5	+61.5 +54.4	7.0	1.4		1.3	9.5 20.3	0.9	75.8 161.8	-3.6 -8.2	35.8	7.3	6.8	99.8 213.1	+11.6 +6.3	47.2	9.7	8.9
1972	18.2 37.1	+23.8 +17.8	7.8	1.4		1.5	11.2 22.9	0.9	76.6 156.4	+1.1 -3.3	33.0	6.8	6.3	115.1 235.0	+15.3 +10.3	49.6	10.2	9.5
1973	16.8 32.9	-7.7 -11.3	6.8	1.3		1.3	12.2 23.9	0.9	74.5 145.7	-2.7 -6.8	30.2	5.9	5.7	131.0 256.2	+13.8 +9.0	53.1	10.4	10.0
1974	20.2 36.8	+20.2 +11.9	7.5	1.5		1.4	13.8 25.2	0.9	77.8 141.8	+4.4 -2.7	29.0	5.6	5.4	141.1 257.3	+7.7 +0.4	52.6	10.2	9.7
1975	32.3 53.5	+59.9 +45.4	10.0	2.2		2.0	15.6 25.9	0.9	85.6 141.9	+10.0 +0.1	26.4	5.8	5.2	174.0 288.5	+23.3 +12.1	53.6	11.8	10.5
1976	42.2 65.4	+30.7 +22.2	11.5	2.6		2.3	17.0 26.4	0.9	89.4 138.6	+4.4 -2.3	24.5	5.4	4.9	196.9 305.4	+13.2 +5.9	53.9	12.0	10.8
1976 TQ	9.6 14.5	- -	-	-		-	4.7 7.1	0.9	22.3 33.6	- -	23.6	5.2	4.6	54.5 82.2	- -	57.9	1.1	1.7

the Economy and the Budget. Part 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14
$ Bil	Interest Rate on Federal Debt		Interest Expense on Government Debt					Adjusted (F)		Adjusted (G)		Interest Receipts Adj	
					Percent of								
Fiscal Years	Current	10 year Average	Current $/ Constant	% Chg	Total Expense	Actual GNP	"Norm" GNP	Current $/ Constant	% of "Norm" GNP	Current $/ Constant	% of "Norm" GNP	Current $/ Constant	Current $/ Constant
1960	3.25	N.C.	9.3 27.9	+21.8	10.1	1.9	1.7	N.C.	-	N.C	-	N.C.	—
1961	3.18	↓	9.1 26.4	-2.1 -5.3	9.3	1.8	1.6	↓		↓		↓	
1962	3.17		9.3 26.6	+2.1 +0.8	8.7	1.7	1.5						
1963	3.37		10.1 28.4	+8.4 +6.8	9.1	1.7	1.6						
1964	3.50		10.7 29.6	+6.8 +4.2	9.0	1.7	1.6						
1965	3.67		11.5 31.3	+7.3 +5.7	9.7	1.7	1.6						
1966	3.89		12.3 32.6	+6.8 +4.2	9.1	1.7	1.6						
1967	4.29		13.9 35.7	+12.7 +9.5	8.9	1.8	1.7						
1968	4.48		15.3 42.7	+10.3 +19.6	8.9	1.8	2.0						
1969	4.84	3.92	17.2 40.7	+12.4 -4.7	9.3	1.9	1.8						

the Economy and the Budget- Part 2

$Bil	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
	Economy Related Transfer Payments						Adjusted (H)		Defense Expenditures					All Gov't Expenditures excluding Interest, Economy Related Transfer Payments & Def. Exp.				
			Percent of								Percent of					Percent		
Fiscal Year	Current $/ (a) Constant	% Chg	Total Expense	Actual GNP		"Norm" GNP	Current $/ w/ Constant	% of "Norm" GNP	Cur. $/ (b) Const.	% Chg	Total Expense	Act. GNP	"Norm" GNP	Cur. $/ (c) Const.	% Chg.	Total Expense	Act. GNP	"Norm" GNP
1960	N.A.	-	-	-		-	N.C.	-	45.2 132.6	N.C N.C.	49.0	9.1	8.2	N.C. N.C.	-	-	-	-
1961	N.A.	-	-	-		-			46.6 135.1	+3.1 +1.9	47.6	9.1	8.1	N.C. N.C.	-	-	-	-
1962	6.6 18.9	N.C N.C.	6.2	1.2		1.0			49.0 140.2	+5.2 +3.8	45.9	9.0	8.1	41.9 119.9	- -	39.2	7.7	6.9
1963	6.4 18.1	-3.0 -4.2	5.8	1.1		1.0			50.1 140.9	+2.2 +0.3	45.0	8.7	7.8	44.7 125.7	+6.7 +4.8	40.2	7.7	7.0
1964	6.5 17.9	+1.6 -1.1	5.5	1.0		0.9			51.5 142.7	+2.8 +1.3	43.4	8.3	7.7	49.9 138.2	+11.6 +9.9	42.1	8.1	7.4
1965	6.1 16.7	-6.2 -6.7	5.2	0.9		0.8			47.5 129.3	-7.8 -9.4	40.1	7.2	6.7	53.3 145.1	+6.8 +5.0	46.7	8.4	7.5
1966	5.7 15.2	-6.6 -9.0	4.2	0.7		0.7			54.9 145.6	+15.6 +12.6	40.8	7.8	7.3	61.8 163.8	+15.9 +12.9	45.9	8.5	8.2
1967	6.0 15.3	+5.3 +0.7	3.8	0.7		0.7			68.2 175.2	+24.2 +20.3	43.1	8.8	8.5	70.2 180.4	+13.6 +10.1	44.3	9.0	8.7
1968	6.5 16.1	+8.3 +5.2	3.6	0.7		0.7			78.8 195.5	+15.5 +11.6	44.1	9.4	9.1	78.2 194.0	+11.4 +7.5	43.7	9.4	9.1
1969	7.3 17.2	+12.3 +6.8	4.0	0.8		0.7			79.4 188.1	+0.8 -3.7	43.0	8.7	8.5	80.6 190.9	+3.1 -1.6	43.7	8.8	8.6

the Economy and the Federal Debt

	Gross National Product							Utilization of Resources			Interest Rates					Inflation	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
$Bil.	Actual			Adjusted Normal (A)		Adjusted Potential (B)		% of Capacity									
Cal Year	Current/ (+)Constant	% Change	% of Adj Norm	Current (+)Constant	% Change	Current (+)Constant	% Change	Mfg.	Major Mat'ls	unemployed	Federal Funds	90 day T-Bills	Long Term Gov't	on Gov't Debt	Prime Bank Rate	Corp. Bond DJ	GNP Deflator 1981=100 index/ % chg
1977	1918.0 2744.7	+11.6 +5.5	91.8	2089.6 2990.4	+9.6 +3.6	1989.1 2846.8	+3.9 +2.3	82.0	82.7	7.0	5.54	5.26	7.71	N.A.	6.82	8.2	69.87 +5.8
1978	2156.1 2875.2	+12.4 +4.8	92.9	2321.8 3097.1	+11.1 +3.6	2170.9 2896.7	+13.7 +1.8	84.4	85.6	6.0	7.94	7.22	8.53	N.A.	9.06	8.7	74.95 +7.3
1979	2413.9 2967.6	+12.0 +3.2	92.5	2608.9 3207.7	+12.4 +3.6	2397.5 2946.3	+10.4 +1.8	85.6	87.4	5.8	11.20	10.04	9.35	N.A.	12.67	9.6	81.35 +8.5
1980	2626.1 2962.9	+8.8 -0.2	89.2	2945.7 3322.2	+14.6 +3.6	2827.0 3182.7	+17.9 +8.2	79.1	80.0	7.1	13.36	11.62	11.59	N.A.	15.27	12.3	88.65 +9.0
1981	2925.5 3022.0	+11.4 +2.0	87.8	3331.8 3440.8	+13.1 +3.6	3173.5 3276.4	+12.3 +2.8	78.5	80.0	7.7	16.46	14.08	13.74	N.A.	18.95	14.3	96.81 +9.2
1977-81 5 year Average	2402.9 2914.5	+11.2 +3.0	90.8	2659.8 3211.6	+11.8 3.6	2511.6 3030.8	+12.5 +3.9	81.9	83.1	6.7	10.9	9.6	10.2	N.A.	12.55	10.6	+8.0
1970-81 12 year Average	1797.0 2620.3	+9.9 +2.7	91.0	1946.6 2858.0	+10.7 +3.6	1852.5 2747.6	+10.7 +3.6	81.2	83.3	6.4	8.41	7.40	8.3	N.A.	9.59	9.4	+6.9
1960-69 10 year Average	689.5 1815.8	+6.8 +4.2	93.4	734.2 1938.8	+6.2 +3.6	687.2 1813.6	+6.2 +3.6	84.9	85.5	4.8	4.18	4.00	4.60	N.A.	5.28	5.47	+2.5

NOTES: (A): Adjusted "Normal" GNP is based on trend adjusted 1960-69 average updated at its annual average post-war growth rate of +3.6%

(B): Adjusted "Potential" GNP has been computed by dividing actual GNP by the ratio of actual utilization to 85% (1960-69 average) of manufacturing capacity

(+): Constant 4th quarter 1981 dollars.

the Economy and the Federal Debt

Total Federal Debt

	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
$Bil	Total Federal Debt				Adjusted (C)				Gov't Debt held by Federal Res. Banks					Gov't Debt held by Private investors and by Gov't as trustee for the Public				
Cal Year	Current $ (t) Constant	% Change	% of GNP Act.	% of GNP "Norm"	Current $/ (t) Constant	% Chg	% of GNP Act.	% of GNP "Norm"	Current $/ (t) Constant	% Change	% of Total Debt	% of GNP Act.	% of GNP "Norm"	Current $/ (t) Constant	% Chg.	% of Total Debt	% of GNP Act.	% of GNP "Norm"
1977	690.3 987.9	+10.0 +4.0	36.0	33.0	358.4 506.5	+2.4 +1.5	18.3	16.8	101.4 145.0	+7.4 +1.4	14.7	5.3	4.9	588.9 842.9	+10.5 +4.5	85.3	30.7	28.2
1978	761.9 1016.6	+10.4 +3.0	36.2	32.8	353.7 471.9	10.9 -5.9	16.4	15.2	109.1 145.5	+7.6 +0.3	14.3	5.1	4.7	652.9 871.1	+10.9 +3.3	85.7	30.3	28.1
1979	818.3 1005.9	+7.4 -1.1	33.9	31.4	345.1 424.2	-2.4 -10.1	14.3	13.2	113.0 138.9	+3.6 -4.5	13.8	4.7	4.3	705.4 867.1	+8.0 -0.5	86.2	29.2	27.0
1980	894.8 1009.3	+9.3 +0.3	34.1	30.4	321.5 362.7	-6.8 -14.5	12.2	10.9	120.8 136.4	+6.9 -1.8	13.5	4.6	4.1	774.0 873.0	+9.7 +0.7	86.5	29.5	26.3
1981	990.6 1023.2	+10.7 +1.4	33.8	29.7	309.8 320.0	-3.6 -11.8	10.6	9.3	122.5 126.5	+1.4 -7.2	12.3	4.2	3.7	868.1 896.7	-11.4 +2.7	87.6	29.7	26.1
1977-81 5 year Average	831.2 1008.6	+9.1 +1.4	34.8	31.5	336.1 416.1	-1.0 -8.3	14.4	13.1	113.4 139.5	+5.1 -2.4	13.7	4.8	4.3	717.9 870.2	+9.7 +2.0	86.3	29.9	27.1
1970-81 12 year Average	623.7 925.6	+8.6 +1.7	35.5	32.6	344.6 555.3	+1.2 -7.6	22.0	20.4	91.6 138.8	+6.1 +0.8	15.1	5.4	4.9	532.6 788.5	+8.9 +2.0	85.0	30.1	27.6
1960-69 10 year Average	316.0 840.2	+2.3 -0.2	47.1	43.8	N.C.				38.7 101.8	+7.6 +4.9	12.1	5.6	5.2	277.3 738.4	+1.6 -0.9	87.8	41.5	38.6

NOTES: (C): Adjusted to what Federal Government Debt would have totaled if the deficits had been adjusted on the basis of the 1969 Rates of interest and the corresponding changes which could reasonably have been expected in Receipts and expenditures.

(t): Constant 4th quarter 1981 dollars.

the Economy and the Federal Debt

	Gross National Product							Utilization of Resources			Interest Rates					Inflation	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
$Bil. Cal. Year	Actual Current(1) Constant	% Change	% of Adj. "Norm"	Adjusted "Normal" (A) Current(1) Constant	% Change	Adjusted Potential (B) Current(1) Constant	% Change	% of Capacity Mfg.	% of Capacity Major mat'ls	unemployment	Federal Funds	90 day T-Bills	long Term Gov't	old Gov't Debt	Prime Bank Rate	Corp Bond DJ	GNP Deflator 1981:100 index/% chg
1969	944.0 2176.4	+8.1 +2.8	96.4	980.0 2258.7	+9.0 +3.6	931.0 2145.7	+9.1 +3.8	86.2	88.3	3.5	8.21	6.69	6.33	N.A.	7.95	7.4	43.38 +5.2
1970	992.7 2172.3	+5.2 -0.2	92.9	1069.4 2339.3	+9.1 +3.6	1063.8 2326.8	+14.3 +8.4	79.4	82.5	4.9	7.17	6.44	6.86	N.A.	7.91	8.5	45.75 +5.5
1971	1077.7 2245.9	+8.6 +3.3	92.7	1162.6 2422.9	+8.7 +3.6	1168.7 2435.7	+9.9 +4.7	78.4	81.4	5.9	4.66	4.34	6.12	N.A.	5.70	8.0	47.98 +4.9
1972	1185.9 2373.0	+10.0 +5.7	94.6	1253.5 2509.3	+7.8 +3.6	1192.1 2419.4	+2.0 -0.7	83.4	87.0	5.6	4.44	4.07	6.01	N.A.	5.25	7.7	49.95 +4.1
1973	1326.4 2511.2	+11.8 +5.8	96.6	1372.4 2598.9	+9.5 +3.6	1287.2 2437.4	+8.0 +0.7	87.6	91.8	4.9	8.74	7.03	7.12	N.A.	8.02	8.2	52.81 +5.7
1974	1434.2 2497.3	+8.1 -0.6	92.8	1546.7 2691.7	+12.6 +3.6	1452.2 2535.2	+13.2 +4.0	83.8	87.2	5.6	10.51	7.87	8.06	N.A.	10.80	9.5	57.45 +8.8
1975	1549.2 2468.9	+8.0 -1.1	88.6	1748.8 2787.8	+13.1 +3.6	1805.4 2879.4	+23.9 +13.6	72.9	73.4	8.5	5.82	5.82	8.19	N.A.	7.86	9.7	62.72 +9.2
1976	1718.0 2602.2	+10.9 +5.4	90.1	1906.8 2887.3	+9.1 +3.6	1832.8 2783.1	+1.8 -3.3	79.5	81.1	7.7	5.05	5.00	7.87	N.A.	6.84	8.6	66.03 +5.3

the Economy and the Federal Debt

Total Federal Debt

$Bil Cal. Year	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
	Total Federal Debt				Adjusted (C)				Gov't Debt held by Federal Res. Banks					Gov't Debt held by Private Investors and by Gov't as trustee for the Public				
	Current $ (c) Constant	% Change	% of GNP Act.	% of GNP "Norm"	Current $/ (c) Constant	% Chg.	% of GNP Act.	% of GNP "Norm"	Current $/ (c) Constant	% Change	% of Total Debt	% of GNP Act.	% of GNP "Norm"	Current $/ (c) Constant	% Chg.	% of Total Debt	% of GNP Act	% of GNP "Norm"
1969	359.7 829.3	+2.7 -2.4	38.1	36.7	N.C.	-	-	-	54.5 125.5	+4.8 -0.4	15.2	5.8	5.6	305.2 703.8	+2.3 -2.7	84.8	32.3	31.1
1970	376.9 824.6	+4.8 -0.6	38.0	35.2	361.8 791.3	+0.6 -4.6	36.5	33.8	58.9 128.8	+8.1 +2.6	15.6	5.9	5.5	318.0 695.8	+4.2 -1.1	84.4	32.0	29.7
1971	405.7 845.5	+7.6 +2.5	37.6	34.9	365.4 761.6	+1.0 -3.8	33.9	31.4	66.9 139.5	+13.6 +8.3	16.5	6.2	5.7	338.9 706.0	+6.6 +1.5	83.5	31.4	29.2
1972	433.6 868.1	+6.9 +2.7	36.6	34.6	355.8 712.3	-2.6 -6.5	30.0	28.4	70.2 142.7	+4.9 +2.3	16.2	5.9	5.6	363.4 737.7	+7.2 +4.5	83.8	30.6	29.0
1973	461.2 873.5	+6.4 +0.7	34.8	33.6	351.9 666.4	-1.1 -6.4	26.5	25.6	76.0 143.9	+8.3 +0.8	16.5	5.7	5.5	385.2 729.6	+6.0 -1.1	83.5	29.0	28.1
1974	480.5 836.9	+4.2 -4.2	33.5	31.1	353.1 614.6	+0.3 -7.8	24.6	22.8	80.4 140.0	+5.8 -2.7	16.7	5.6	5.2	400.1 696.9	+3.9 -4.5	83.3	27.9	25.9
1975	543.3 865.8	+13.1 +3.5	35.1	31.1	340.0 542.1	-3.7 -11.8	21.9	19.4	85.3 135.9	+6.1 -2.9	15.7	5.5	4.7	463.0 737.9	+15.7 +5.9	85.2	29.9	25.6
1976	627.3 949.7	+15.5 +9.7	36.5	32.9	326.3 494.2	-4.0 -8.8	19.0	17.1	94.4 143.0	+10.7 +5.2	15.0	5.5	5.0	532.9 806.8	+15.1 +9.3	85.0	31.0	27.9

the Economy and the Federal Debt

	Gross National Product							Utilization of Resources			Interest Rates					inflation	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
$ Bil.	Actual			Adjusted "Normal" (A)		Adjusted Potential (B)		% of Capacity		unem-ployment	Federal Funds	90 day T-Bills	long Term Gov't	on Gov't Debt	Prime Bank Rate	Corp Bond DJ	GNP Deflator 1981=100 index/ % chg
Cal Year	(1) Current $ (2) Constant	% change	% of Adj "Norm"	(1) Current $ (2) Constant	% Change	(1) Current $ (2) Constant	% Change	Mfg.	Major mat'ls								
1960	506.5 1475.2	+3.8 +2.2	88.8	570.4 1647.2	+6.1 +3.6	537.7 1565.4	+5.8 +4.1	80.1	79.8	5.5	3.22	2.95	4.01	N.A.	4.82	5.3	34.35 +1.7
1961	524.6 1513.8	+3.6 +2.6	88.8	590.8 1706.0	+3.6 +3.6	576.5 1664.6	+7.2 +6.3	77.3	77.9	6.7	1.96	2.38	3.92	N.A.	4.50	5.1	34.63 +0.8
1962	565.0 1601.4	+7.7 +5.8	90.6	623.4 1766.9	+5.5 +3.6	590.0 1672.2	+2.3 +0.5	81.4	81.5	5.5	2.68	2.78	3.99	N.A.	4.50	5.0	35.28 +1.9
1963	596.7 1665.9	+5.6 +4.0	92.1	647.5 1830.0	+3.9 +3.6	607.6 1695.8	+3.0 +1.4	83.5	83.8	5.7	3.18	3.16	4.05	N.A.	4.50	4.6	35.83 +1.6
1964	637.7 1753.7	+6.9 +5.3	92.5	689.5 1895.4	+6.5 +3.6	633.5 1741.4	+4.2 +2.7	85.6	87.8	5.2	3.50	3.55	4.19	N.A.	4.50	4.6	36.38 +1.5
1965	691.0 1859.6	+8.4 +6.0	94.7	729.6 1963.0	+5.8 +3.6	655.7 1764.1	+3.5 +1.3	89.6	91.0	4.5	4.07	3.95	4.27	N.A.	4.54	4.7	37.17 +2.2
1966	756.0 1970.6	+9.4 +6.0	96.9	780.1 2033.1	+6.9 +3.6	705.5 1838.6	+7.6 +4.2	91.1	91.4	3.8	5.11	4.88	4.77	N.A.	5.62	5.5	38.37 +3.2
1967	799.6 2023.8	+5.8 +2.7	96.2	831.5 2105.6	+6.6 +3.6	781.7 1979.5	+10.8 +7.7	86.9	86.0	3.8	4.22	4.33	5.01	N.A.	5.63	5.9	39.49 +2.9
1968	873.4 2117.2	+9.2 +4.6	97.1	899.4 2180.8	+8.2 +3.6	853.0 2068.5	+9.1 +4.5	87.0	87.4	3.6	5.66	5.34	5.45	N.A.	6.28	6.6	41.24 +4.4
1969	944.0 2176.4	+8.1 +2.8	96.4	980.0 2258.7	+9.0 +3.6	931.0 2146.1	+9.1 +3.8	86.2	88.3	3.5	8.21	6.69	6.33	N.A.	7.95	7.4	43.38 +5.2

the Economy and the Federal Debt

Total Federal Debt

$Bil Cal. Year	Total Federal Debt				Adjusted (C)				Gov't Debt held by Federal Res. Banks					Gov't Debt held by Private investors and by Gov't as trustee for the Public				
	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
	Current $ (c) Constant	% Change	% of GNP Act	% of GNP "Norm"	Current $/ (c) Constant	% Chg	% of GNP Act.	% of GNP "Norm"	Current $/ (c) Constant	% Change	% of Total Debt	% of GNP Act.	% of GNP "Norm"	Current $/ (c) Constant	% Chg	% of Total Debt	% of GNP Act.	% of GNP "Norm"
1960	285.9 832.3	0.0 -1.6	56.4	50.1	N.C	-	-	-	27.0 78.6	+2.7 +0.9	9.4	5.3	4.7	258.9 753.7	-0.2 -1.8	90.6	51.1	45.4
1961	289.1 834.8	+1.1 +0.3	55.1	48.9				-	27.7 80.0	+2.6 +1.8	9.6	5.3	4.7	261.4 754.8	+1.0 +0.1	90.4	49.8	44.2
1962	296.3 839.9	+2.5 +0.6	52.4	47.5					29.9 84.8	+7.9 +6.0	10.1	5.3	4.8	266.4 755.1	+1.9 0.0	89.9	47.2	42.7
1963	303.0 845.7	+2.3 +0.7	50.8	46.8					32.3 90.1	+8.0 +6.3	10.7	5.4	5.0	270.7 755.6	+1.6 +0.1	89.3	45.4	41.8
1964	310.1 852.4	+2.3 +0.8	48.6	45.0					35.3 97.0	+9.3 +7.7	11.4	5.5	5.1	274.8 755.4	+1.5 0.0	88.6	43.0	39.9
1965	314.5 846.1	+1.4 -0.7	45.5	43.1					38.3 105.7	+11.3 +9.0	12.5	5.6	5.4	275.2 740.4	+0.1 -2.0	87.5	39.4	37.7
1966	319.9 833.7	+1.7 -1.5	42.3	41.0					42.5 110.8	+8.1 +4.8	13.3	5.6	5.4	277.4 722.9	+0.8 -2.4	86.7	36.7	35.6
1967	331.3 838.9	+3.6 +0.6	41.4	39.8					46.9 118.8	+10.4 +7.2	14.2	5.9	5.6	284.4 720.1	+2.5 -0.4	85.8	35.6	34.2
1968	350.3 849.4	+5.7 +1.3	40.1	38.9					52.0 126.1	+10.9 +6.1	14.8	6.0	5.8	298.3 723.3	+4.9 +0.4	85.2	34.2	33.1
1969	359.7 829.2	+2.7 -2.4	38.1	36.7					54.5 125.6	+4.8 -0.4	15.2	5.8	5.6	305.2 703.6	+2.3 -2.7	84.8	32.3	31.1

Money Supply

1	2	3	4	5	6	7	8	9	10	11	12	13
$ Bil. Cal Year	Money Supply M1 Total				Adjusted A		Currency Component of M1			Non-currency Component of M1		
	Current (t) Constant	% Change	% of GNP Act.	Norm.	Current (t) Constant	% of normal GNP	Current*/ (t) Constant	% Change	% of Total M1	Current*/ (t) Constant	% Change	% of Total M1
1977	324.1 463.9	+7.6 +1.8	16.9	15.5	343.3 491.3	16.4	84.8 121.4	+9.1 +3.1	26.2	239.3 342.5	+7.1 +1.2	73.8
1978	350.7 467.9	+8.2 +0.9	16.3	15.1	369.6 493.2	15.9	93.2 124.4	+9.9 +2.5	26.6	257.5 343.6	+7.6 +1.3	73.4
1979	377.6 464.2	+7.7 -0.8	15.6	14.5	403.2 495.6	15.5	102.3 125.8	+9.8 +1.1	27.1	275.3 338.4	+6.9 -1.5	72.9
1980	401.3 452.7	+6.3 -2.5	15.3	13.6	440.3 496.7	15.5	111.7 126.0	+9.2 +0.2	27.8	289.6 326.7	+5.2 -3.5	72.2
1981	429.5 443.7	+7.0 -2.9	14.7	12.5	482.9 498.9	14.5	119.8 123.8	+7.3 -2.7	27.9	309.7 319.9	+6.9 -2.1	72.1
1982 (Febr.)	447.2 439.8	+6.6 -1.4	14.8	12.5	499.4 491.1	14.2	124.6 122.5	+6.3 -1.8	27.9	322.6 317.2	+6.8 -1.3	72.1
5 year average 1977-81	376.6 458.5	+7.4 -0.5	15.0	14.2	407.9 495.1	15.6	102.4 124.3	+9.0 +1.0	27.1	274.3 334.2	+6.8 -1.1	72.9
12 year average 1970-81	306.6 470.8	+6.4 -0.5	18.1	16.5	324.2 488.2	17.3	78.2 116.4	+8.5 +1.5	25.1	223.0 350.0	+5.7 -1.1	74.9
10 year average 1960-69	165.7 439.2	+3.7 +1.2	24.5	22.8	NC	NC	35.2 93.0	+4.5 +1.9	21.2	130.5 343.3	+3.5 +1.0	78.8

Notes:

(A) Adjusted Money Supply has been computed as that percent of normal GNP (See page 17a) which is the 1960-69 ten year average of M1 as a ratio to GNP (24.5%) brought up to date (and adjusted for the long term trend of "Velocity" at the average annual rate of change of that ratio during the same 1960-69 period.

*: Includes demand deposits ($236 Bil. or 54% of M1 at end of 1981) other checkable deposits ($77 Bil or 17.5% M1 at the end of 1981) and non-Bank Traveler Checks ($4.4 Bil or 1% M1 at end of 1981)

(t): Constant dollar figures are in terms of purchasing power of 4th quarter of 1981 dollars as distinguished from 1972 dollars used in most Government statistics.

(NC) Not computed

Money Supply

	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
$Bil	Money Supply M2** Total				Required Bank Reserves			Total Bank Reserves						Borrowed Bank Reserves		
Cal. Year	Current $/ (t) Constant	% Chg.	% of GNP Act	% of GNP Norm.	Cur. $/ (t) Const.	% Chg.	% of Total M2	Cur. $/ (t) Const.	% Chg.	% of Total M2	% of Req. Reserves	% of GNP Act.	% of GNP Norm.	Cur. $/ (t) Const.	% Chg.	% of Total M2
1977	1244.5 1781.2	+13.0 +6.7	62.4	59.5	35.0 50.1	+2.6 -2.9	10.8 2.8	35.2 50.4	+2.6 -2.9	10.9 2.3	100.6	1.8	1.7	0.5 0.7	+100+ +100+	0.1 0.0
1978	1354.3 1806.9	+8.8 +1.4	62.8	58.3	37.8 50.4	+8.0 +0.6	10.8 2.8	38.0 50.7	+8.0 +0.6	10.8 2.8	100.5	1.8	1.6	0.9 1.2	+100+ +100+	0.3 0.1
1979	1540.0 1893.1	+13.7 +4.8	63.8	47.3	41.2 50.7	+8.5 +0.6	10.9 2.7	41.4 50.9	+8.9 +0.4	11.0 2.7	100.5	1.7	1.6	1.3 1.7	+54.0 +42.2	0.4 0.1
1980	1729.6 1951.0	+12.3 +3.1	65.9	52.1	I 42.4 47.8	+2.9 -5.7	10.6 2.5	42.7 48.2	+3.1 -5.3	10.6 2.5	1007	1.6	1.5	1.4 1.6	+6.0 -3.0	0.4 0.1
1981	1747.2 1816.0	+1.1 -6.9	59.7	50.8	39.4 40.7	-7.1 -14.9	9.2 2.3	39.7 41.0	-7.0 -14.9	9.2 2.3	100.8	1.4	1.2	1.4 1.4	-2.9 -12.5	0.3 0.1
1982 (Feb.)	1847.2 1816.5	+10.1 +1.8	61.3	51.7	40.6 39.9	+4.8 -3.1	9.1 2.2	40.9 40.3	+4.6 -3.3	9.2 2.2	100.8	1.4	1.2	1.8 1.8	+36.7 +26.8	0.4 0.1
5yr. Average 1977-81	1523.1 1849.6	+9.7 +1.7	62.9	53.6	39.2 47.9	+2.9 -4.6	10.5 2.6	39.4 48.2	+3.0 -4.6	10.5 2.6	100.6	1.7	1.5	1.1 1.4	+72.1 +36.1	0.3 0.1
12 year average 1970-81	1124.3 1665.2	+9.6 +2.5	63.1	56.7	35.4 55.2	+3.1 -3.5	11.8 3.4	35.6 55.5	+3.1 -3.5	11.9 3.2	100.6	2.2	2.0	.9 1.4	1.7 -4.9	0.4 0.1
10 year average 1960-69	434.3 1143.8	+7.1 +4.4	62.9	58.8	21.6 57.2	+4.1 +1.5	13.0 5.0	22.0 58.4	+3.9 +1.4	13.3 5.2	102.1	3.3	3.0	0.4 1.1	+3.4 +0.8	0.2 0.1

Notes:

(**): M2 = M1 plus savings and small denomination time deposits at all depository inst., overnight repurchase agreements at com. banks, overnight Eurodollars held by US residents other than banks at Caribbean branches of member banks, and money market mutual fund shares.

(I): Requirements for reserves on some form of bank deposits were increased in 1966, 1968, 1969, 1973 and 1980

(R): Requirements for Reserves on some form of Bank Deposits were reduced in 1967, 1970, 1972 1974, 1975 and 1976.

(t): Constant dollar figures are in terms of purchasing power of 4th quarter of 1981 dollars as distinguished from 1972 dollars used in most Government statistics.

(NC): Not computed

Money Supply

1	2	3	4	5	6	7	8	9	10	11	12	13
$ Bil Cal. Year	Money Supply M1 Total				Adjusted		Currency Component of M1			Non-Currency Component of M1*		
	Current (+) Constant	% Change	% of GNP Act.	Nom.	Current 2/ (+) Constant	% of Nom. GNP	Current 2/ (+) Constant	% Change	% of Total M1	Current 2/ (+) Constant	% Change	% of Total M1
1969	203.5 469.1	+5.9 +0.7	21.6	20.8	206.5 476.0	21.1	44.8 103.3	+6.7 +3.2	22.0	158.7 366.8	+5.7 +2.2	78.0
1970	211.2 462.0	+3.9 -1.5	21.3	19.8	218.4 477.8	20.4	47.7 104.4	+6.5 +1.1	22.6	163.5 357.7	+4.0 -2.2	77.4
1971	225.5 469.0	+6.8 +1.5	20.9	19.4	230.2 479.7	19.8	51.1 106.3	+7.1 +1.8	22.7	174.4 362.8	+6.7 +1.4	77.3
1972	241.7 483.40	+7.2 +3.1	20.4	19.3	240.7 481.8	19.2	54.6 109.2	+6.8 +2.7	22.6	187.1 390.2	+7.3 +7.6	77.4
1973	259.3 490.1	+7.0 +1.4	19.6	18.9	255.3 483.4	18.6	59.3 112.1	+8.6 +2.8	22.9	200.0 378.0	+6.9 -3.1	77.1
1974	272.2 473.6	+5.0 -3.4	20.0	17.8	278.8 485.4	18.0	64.9 112.9	+9.4 +0.7	23.8	207.0 360.7	+3.7 -4.6	76.2
1975	284.9 454.2	+4.6 -4.1	18.4	16.3	305.0 486.3	17.4	70.9 113.0	+9.2 +0.1	24.9	214.0 341.2	+3.2 -5.4	75.1
1976	301.1 455.8	+5.7 +0.4	17.5	15.8	322.7 488.7	17.0	77.7 117.7	+9.6 +4.2	25.8	223.4 338.3	+4.4 -0.8	74.2

Money Supply

	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
$ Bil	Money Supply M2** Total				Required Bank Reserves			Total Bank Reserves						Borrowed Bank Reserves		
Cal. Year	Current $/ (c) Constant	% Change	% of GNP Act.	Norm.	Cur $/ (c) Const.	% Chg.	% of Total M1/M2	Cur. $/ (c) Const.	% Chg.	% of Total M1/M2	% of Req. Reserves	% of GNP Act.	"Norm"	Cur. $/ (c) Const.	% Chg.	% of Total M1/M2
1969	583.4	+5.9	61.8	59.5	(I)27.2	+5.4	13.4	27.4	+5.0	13.5	100.7	2.9	2.8	1.1	+982	0.6
	1344.9				62.7	+0.2	4.7	63.2	-0.2	4.7				2.6	+882	0.2
1970	607.9	+4.2	61.2	57.6	(R)28.1	+3.3	13.3	28.3	+3.3	13.4	100.7	2.9	2.7	0.8	-27.0	0.4
	1346.4	+0.1			61.5	-1.9	4.6	61.9	-2.0	4.7				1.8	-30.9	0.1
1971	684.6	+12.6	63.5	59.8	30.3	+7.8	13.4	30.4	+7.4	13.5	100.3	2.8	2.6	0.4	-93.4	0.2
	1447.7	+ 7.5			63.0	+2.4	4.4	63.2	+2.1	4.4				0.9	-94.7	0.1
1972	770.1	+ 12.5	64.9	61.4	(R)32.4	+6.9	13.4	32.6	+7.2	13.5	100.6	2.8	2.6	0.3	-22.0	0.1
	1541.7	+ 6.5			64.8	+2.9	4.2	65.2	+3.2	4.2				0.6	-24.7	0.0
1973	842.9	+ 9.5	63.5	61.4	(F)33.1	+2.2	12.8	33.3	+2.1	12.8	100.6	2.5	2.4	1.7	+100+	0.7
	1596.1	+ 3.5			62.6	-3.4	3.9	62.9	-3.5	4.0				3.2	+100+	0.2
1974	893.8	+6.0	62.3	58.1	(R)36.3	+9.7	13.3	36.5	+9.6	13.4	100.6	2.5	2.4	2.1	+22.0	0.8
	1564.0	+10.8			63.2	+1.0	4.1	63.5	+1.0	4.1				3.6	+12.3	0.2
1975	973.9	+9.0	62.9	56.3	(R)34.9	-3.9	12.2	35.1	-3.8	12.3	100.6	2.3	2.0	0.2	-90.7	0.1
	1569.8	+0.4			55.6	-12.0	3.6	56.0	-11.8	3.6				0.3	-91.6	0.0
1976	1101.8	+13.2	64.1	57.8	(R)34.1	-2.3	11.3	34.3	-2.3	11.4	100.6	2.0	1.8	0.1	-52.6	0.0
	1668.6	+ 6.3			51.6	-7.2	3.1	51.9	-7.3	3.1				0.1	-53.3	0.0

Money Supply

1	2	3	4	5	6	7	8	9	10	11	12	13
$ Bil. Cal. year	Money Supply M1 Total				Adjusted		Currency Component of M1			Non-Currency Component of M1*		
	Current (1) Constant	% Change	% of GNP Act.	Norm.	Current (2) Constant	% of Norm. GNP	Current 4/ (4) Constant	% Change	% of Total M1	Current 4/ (4) Constant	% Change	% of Total M1
1960	141.4 411.7	+0.1 -1.6	27.9	25.0	NC	NC	29.0 84.4	+0.4 -1.4	20.5	112.4 327.3	0 -1.6	79.5
1961	144.3 416.7	+2.1 +1.2	27.5	24.4	NC	NC	29.1 84.0	+0.3 -0.5	20.2	116.2 332.1	+2.5 +1.5	79.9
1962	147.9 419.2	+2.5 +0.6	26.2	23.7	NC	NC	30.1 85.3	+3.4 +1.6	20.4	117.8 333.9	+2.3 +0.5	79.6
1963	152.4 425.3	+3.0 +1.5	25.5	23.2	NC	NC	31.6 88.2	+5.0 +3.4	20.7	120.8 337.2	+2.6 +1.0	79.3
1964	158.3 435.1	+3.9 +2.3	24.8	23.0	NC	NC	33.5 92.1	+6.0 +4.4	21.2	124.8 343.1	+3.3 +1.8	78.8
1965	165.1 444.2	+4.3 +2.1	23.9	22.6	NC	NC	35.3 95.0	+5.4 +3.2	21.4	129.8 349.2	+4.0 +1.8	78.6
1966	172.7 450.1	+4.6 +1.3	22.8	22.1	NC	NC	37.5 97.7	+6.2 +2.8	21.7	135.2 352.4	+4.2 +0.9	78.3
1967	179.5 454.6	+3.9 +1.0	22.5	21.6	NC	NC	39.4 99.8	+5.1 +2.2	22.0	140.1 354.8	+3.6 +0.7	78.0
1968	192.1 465.8	+7.0 +2.5	22.0	21.4	NC	NC	42.0 100.1	+6.6 +0.3	21.9	150.1 357.6	+7.1 +0.8	78.1
1969	203.5 469.1	+5.9 +0.7	21.6	20.8	206.5 476.0	21.1	44.8 103.3	+6.7 +3.2	22.0	158.7 365.8	+5.7 +2.2	78.0

Money Supply

	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
$ Bil.	Money Supply M_2** Total				Required Bank Reserves			Total Bank Reserves						Borrowed Bank Reserves		
Cal Year	Current 5/ (1) Constant	% Chg.	% of GNP Act.	Norm.	Cur. 6/ (1) Const.	% Chg	% of Total M1/M2	Cur. 6/ (1) Const.	% Chg.	% of Total M1/M2	% of Req. Reserves	% of GNP Act.	Norm.	Cur. 7/ (1) Const.	% Chg.	% of Total M1/M2
1960	305.6 889.8	+3.8 +1.1	60.3	54.0	18.0 52.4	-1.1 -2.8	12.7 5.9	18.5 53.9	-0.5 -2.2	13.1 6.1	102.8	3.7	3.3	0.4 1.2	-47.5 -48.5	0.3 0.1
1961	327.0 944.3	+7.0 +6.1	62.3	55.4	18.7 54.0	+3.9 +3.1	13.0 5.7	19.3 55.7	+4.3 +3.3	13.4 5.9	103.2	3.7	3.3	0.1 0.2	-81.0 -91.2	0.1 0.0
1962	352.2 998.3	+7.7 +5.7	62.3	56.5	19.4 55.0	+3.7 +1.9	13.1 5.5	19.9 56.4	+3.1 +1.3	13.5 5.7	102.6	3.5	3.2	0.1 0.3	+37.5 +34.8	0.1 0.0
1963	382.2 1066.6	+8.5 +6.8	64.0	58.3	19.4 54.1	0 -1.6	12.7 5.1	19.9 55.5	0 -2.6	13.1 5.2	102.6	3.3	3.0	0.3 0.7	+100+ +100+	0.2 0.1
1964	412.4 1133.5	+7.9 +6.3	64.7	59.8	20.3 55.8	+4.6 +3.1	12.8 4.9	20.7 56.9	+4.0 +2.5	13.1 5.0	102.0	3.3	3.0	0.3 0.8	+16.0 +14.3	0.2 0.1
1965	445.8 1199.4	+8.1 +5.8	64.5	61.1	21.3 57.3	+4.9 +2.7	12.9 4.8	21.7 57.4	+4.8 +2.6	13.1 4.9	101.9	3.1	3.0	0.5 1.2	+58.6 +55.0	0.3 0.1
1966	474.2 1235.9	+6.4 +3.0	62.7	60.8	(E) 22.4 58.4	+5.2 +1.9	13.0 4.7	22.8 59.4	+5.1 +1.7	13.2 4.8	101.8	3.0	2.9	0.6 1.7	+39.1 +34.7	0.4 0.1
1967	509.1 1289.3	+7.4 +4.3	63.7	61.2	(A) 23.6 59.8	+5.4 +2.4	13.1 4.6	24.0 60.8	+5.3 +2.4	13.4 4.7	101.7	3.0	2.9	0.2 0.5	-71.9 -72.5	0.1 0.0
1968	551.1 1336.3	+8.2 +3.6	63.1	61.3	(E) 25.8 62.6	+9.3 +4.7	13.4 4.7	26.1 63.3	+8.8 +4.1	13.6 4.7	101.2	3.0	2.9	0.6 1.4	+100+ +100+	0.3 0.1
1969	583.4 1344.9	+5.9 +0.6	61.8	59.5	(E) 27.2 62.7	+5.4 +0.2	13.4 4.7	27.4 63.2	+5.0 -0.2	13.5 4.7	100.7	2.9	2.8	1.1 2.6	+98.2 +85.2	0.6 0.2

WIS Credit Proxy

Sum of Principal Components of Non-Government Debt

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	Wis Credit Proxy					Components of Consumer Debt										
$Bil	Total Consumer and Commercial / Industrial Debt					Total Consumer Debt					Consumer Installment Debt			Residential Mortgage Debt		
	Current $/ (+) Constant	% Chg	% of Total M1	% of GNP Act.	% of GNP "Norm"	Cur. $/ (+) Const.	% Chg	% of Credit Proxy	% of GNP Act.	% of GNP "Norm"	Cur. $/ (+) Const.	% Chg.	% of Credit Proxy	Cur. $/ (+) Const.	% Chg	% of Credit Proxy
1977	1743.4 2510.3	+13.6 +7.4	443.9	91.9	84.4	978.0 1399.7	+16.4 +10.0	56.1	51.0	46.8	209.6 300.0	+16.8 +10.4	12.0	768.4 1100.0	+16.2 +9.9	44.1
1978	1980.7 2662.3	+13.6 +6.1	469.3	92.6	86.6	1155.5 1515.0	+16.1 +8.2	57.3	52.7	48.9	249.2 332.5	+18.9 +10.8	12.6	886.3 1182.5	+15.3 +7.5	44.7
1979	2242.9 2779.9	+13.2 +4.4	498.8	93.7	89.7	1298.4 1596.1	+14.3 +5.4	57.9	53.8	51.5	290.6 357.2	+16.6 +7.4	13.0	1002.8 1238.8	+13.7 +4.8	44.9
1980	2445.3 2782.3	+9.0 0.1	514.1	93.8	83.7	1402.9 1582.5	+8.0 -0.9	57.4	53.4	47.6	305.6 344.7	+5.2 -3.5	12.5	1097.3 1237.8	+8.9 -0.1	44.9
1981	2565.5 2674.2	+4.9 -3.9	500.5	88.2	77.4	1443.0 1490.5	+2.9 -5.8	56.2	49.3	43.3	320.8 331.4	+5.0 -3.9	12.5	1122.2 1159.2	+2.3 -6.4	43.7
1977-81 5 year Average	2195.6 2681.8	+10.8 +2.7	485.3	92.0	84.2	1251.6 1516.8	+11.4 +3.2	57.0	52.0	47.6	275.2 333.2	+12.3 +4.1	12.5	976.4 1183.7	+11.2 +3.0	44.5
1970-81 12 year Average	1601.1 2370.6	+10.3 +3.2	412.0	90.6	83.4	896.7 1312.8	+10.6 +3.4	55.6	49.9	45.9	196.3 287.2	+10.5 +3.3	12.2	700.4 1025.6	+10.6 +3.4	43.5
1960-69 10 year Average	N.C. N.C.	— —	— —	— —	— —	311.3 819.7	+9.0 +6.1	— —	44.9	42.0	66.1 173.4	+9.8 +7.1	— —	245.7 646.3	+9.0 +6.1	— —

NOTES: (†) Constant 4th quarter 1981 dollars; (N.C) Not Computed; (N.A) Not Available.

WIS Credit Proxy
Sum of Principal Components of Non-Government Debt

	Components of Commercial/Industrial Debt														other Mortgage Debt		
	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
$Bil	Total Commercial and Industrial Debt					Corporate Bonds			Commercial Paper Excluding Financial Cos			Commercial and Industrial Business loans			other Mortgages		
	Current $/ (+) Constant	% Change	% of Credit Proxy	% of GNP Act.	% of GNP "Norm"	Current $/ (+) Constant	% Change	% of Credit Proxy	Current $/ (+) Constant	% Change	% of Credit Proxy	Current $/ (+) Constant	% Change	% of Credit Proxy	Current $/ (+) Constant	% Change	% of Credit Proxy
1977	512.1 748.1	+9.8 +4.0	29.4	27.9	25.4	384.2 565.0	+11.3 +5.5	22.0	14.8 21.2	+20.3 +14.0	0.8	113.1 161.9	+3.8 -1.9	6.5	253.3 362.5	+11.5 +5.3	14.5
1978	563.0 771.2	+9.9 +3.1	28.4	26.8	25.0	419.6 579.5	+9.2 +2.6	21.2	17.1 22.8	+15.5 +7.5	0.9	126.3 168.5	+11.7 +4.1	6.4	282.7 377.2	+11.6 +4.1	14.3
1979	625.3 800.5	+11.1 +3.8	27.9	26.6	24.7	458.6 580.4	+8.1 +0.2	20.2	24.4 30.0	+42.7 +31.6	1.1	147.1 180.8	+16.5 +7.3	6.6	319.2 392.4	+12.9 +4.0	14.1
1980	694.0 806.8	+11.0 +0.8	28.4	27.2	24.2	490.6 577.3	+8.2 -0.5	20.1	37.5 42.3	+53.7 +41.0	1.5	165.9 187.1	+12.8 +3.5	6.8	348.4 393.0	+9.1 +0.2	14.2
1981	753.4 802.3	+8.6 -0.6	29.4	26.2	23.0	523.3 564.7	+6.7 -2.2	20.4	46.4 47.9	+23.7 +13.2	1.8	183.7 189.8	+10.7 +1.4	7.2	369.1 381.3	+5.9 -3.0	14.4
1977-81 5 year Average	629.6 785.8	+10.1 +2.2	28.7	26.9	24.5	454.2 573.4	+8.7 +1.1	20.6	28.0 32.8	+30.4 +20.8	1.2	147.2 177.6	+11.0 +2.8	6.7	314.5 381.3	+10.2 +2.1	14.3
1970-81 12 year Average	473.7 719.7	+9.6 +2.6	30.0	27.8	25.5	339.4 518.6	+9.9 +3.0	21.6	17.1 23.4	+20.6 +12.8	1.0	118.7 179.0	+9.3 +0.4	7.7	230.7 338.9	+10.9 +3.7	14.4
1960-69 10 year Average	N.C. N.C.	- -	- -	- -	- -	N.A. N.A.	- -	- -	N.A. N.A.	- -	- -	49.3 129.7	+10.5 +2.4	- -	73.8 193.4	+10.4 +7.6	- -

NOTES: (+) Constant 4th quarter 1981 dollars; (NC): Not Computed; (N.A.) Not Available.

W I S Credit Proxy

Sum of Principal Components of Non-Government Debt

	Wis Credit Proxy					Components of Consumer Debt										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
$ Bil.	Total Consumer and Commercial / Industrial Debt					Total Consumer Debt					Consumer Installment Debt			Residential Mortgage Debt		
	Current$/ (+) Constant	% Chg.	% of Total M1	% of GNP Act	% of GNP 'Norm'	Cur.$/ (+) Const.	% Chg	% of Credit Proxy	% of GNP Act.	% of GNP 'Norm'	Cur.$/ (+) Cons.	% Chg	% of Credit Proxy	Cur.$/ (+) Cons.	% Chg.	% of Credit Proxy
1969	790.2 1831.5	NC N.C	292.7	84.6	81.6	432.3 996.5	+8.2 +2.9	54.7	46.8	44.1	97.2 224.1	+11.3 +5.9	12.3	335.1 722.5	+7.4 +2.1	42.4
1970	855.7 1881.2	+8.3 +2.7	309.8	87.2	80.9	461.4 1008.5	+6.7 +1.2	53.9	46.7	43.1	103.2 225.6	+6.2 +0.7	12.1	358.2 783.0	+6.9 +1.4	41.9
1971	937.8 1964.6	+9.6 +4.4	321.6	88.2	81.8	508.5 1059.8	+10.2 +5.1	54.2	47.2	43.7	110.1 229.5	+6.7 +1.7	11.7	398.4 830.3	+11.2 +6.0	42.5
1972	1047.3 2105.9	+11.7 +7.2	337.4	89.2	84.4	579.2 1159.6	+13.9 +9.4	55.3	48.8	46.2	124.2 248.6	+12.8 +8.3	11.9	455.0 910.9	+14.2 +9.7	43.4
1973	1179.2 2246.1	+12.6 +6.7	357.6	89.5	85.7	653.0 1236.5	+12.7 +6.6	55.4	49.2	47.2	143.7 272.1	+15.7 +9.5	12.2	509.3 964.4	+11.9 +5.9	43.2
1974	1280.8 2249.0	+8.6 +0.1	376.0	90.3	83.6	706.7 1230.1	+8.2 -0.5	55.2	49.3	45.7	157.3 273.8	+9.5 +0.6	12.3	549.4 956.3	+7.9 -0.8	42.9
1975	1400.9 2254.6	+9.4 +0.2	398.6	91.7	81.2	753.8 1201.8	+6.7 -2.3	53.8	48.7	43.1	162.4 258.9	+3.2 -5.4	11.6	591.4 942.9	+7.6 -1.4	42.2
1976	1534.1 2336.3	+9.5 +3.6	416.0	90.4	81.5	840.5 1272.9	+11.6 +5.9	54.8	48.9	44.1	179.4 271.7	+10.5 +4.9	11.7	661.1 1001.2	+11.8 +6.3	43.1

NOTES: (+): Constant 4th quarter 1981 dollars; (N.C): Not Computed, (N.A.): Not Available

WIS Credit Proxy

Sum of Principal Components of Non-Government Debt

	Components of Commercial/Industrial Debt														other Mortgage Debt		
	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
$Bil.	Total Commercial and Industrial Debt					Corporate Bonds			Commercial Paper Excluding Financial Co			Commercial and Industrial Business Loans			other Mortgages		
	Current $/ (+) Constant	% Change	% of Credit Proxy	% of GNP Act.	% of GNP "Norm"	Current $/ (+) Constant	% Change	% of Credit Proxy	Current $/ (+) Constant	% Change	% of Credit Proxy	Current $/ (+) Constant	% Change	% of Credit Proxy	Current $/ (+) Constant	% Change	% of Credit Proxy
1969	251.6 589.6	N.C N.C.	31.8	27.6	26.6	e168.1 e392.4	N.C N.C.	21.3	4.9 11.3	+104.2 +94.8	0.6	78.6 181.2	+15.2 +9.7	9.9	106.3 245.4	+7.6 +2.4	13.5
1970	278.4 619.1	+10.9 +5.0	32.5	29.0	26.9	186.9 419.1	+11.2 +5.5	21.8	6.7 14.6	+36.7 +29.2	0.8	84.8 185.4	+7.9 +2.3	9.9	115.9 253.3	+9.0 +3.2	13.5
1971	301.2 637.8	+8.2 +3.0	32.1	29.1	27.0	209.6 446.9	+12.1 +6.6	22.4	7.3 15.2	+9.0 +4.1	0.8	84.3 175.7	-0.6 -5.2	9.0	128.1 267.0	+4.0 +5.4	13.7
1972	319.6 649.1	+6.1 +1.8	30.5	27.8	26.3	232.3 474.3	+10.8 +6.1	23.1	7.7 15.4	+5.5 +1.3	0.7	79.6 159.4	-5.6 -9.3	7.6	148.5 297.3	+15.9 +11.3	14.2
1973	353.2 682.1	+10.5 +5.1	30.0	27.2	26.3	249.5 485.7	+7.4 +2.4	21.2	6.8 12.9	-11.7 -16.2	0.6	96.9 183.5	+21.7 +15.1	8.2	173.0 327.5	+16.5 +10.2	14.7
1974	380.9 682.6	+7.8 +0.1	29.7	27.6	25.6	271.7 492.5	+8.9 +1.4	21.2	11.3 19.7	+66.1 +52.7	0.9	115.9 201.7	+19.6 +9.9	9.0	193.2 336.3	+11.7 +2.7	15.1
1975	436.9 717.6	+14.7 +5.1	31.2	29.5	26.1	306.0 503.9	+12.6 +3.3	21.8	12.6 20.1	+11.5 +2.0	0.9	118.3 188.5	+2.1 -6.5	8.4	210.2 335.1	+8.8 -0.4	15.0
1976	466.4 719.3	+6.8 +0.2	30.4	28.3	25.6	345.1 533.6	+12.8 +5.2	23.8	12.3 18.6	-2.4 -7.5	0.8	109.0 165.1	-7.9 -12.4	7.1	227.2 344.1	+8.1 +2.7	14.8

NOTES: (+): Constant 4th quarter 1981 dollars; (N.C): Not Computed; (N.A.): Not Available.

WIS Credit Proxy

Sum of Principal Components of Non-Government Debt

	Wis Credit Proxy					Components of Consumer Debt										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
$Bil.	Total Consumer and Commercial/Industrial Debt					Total Consumer Debt					Consumer Installment Debt			Residential Mortgage Debt		
	Current ⁴/ (+)Constant	% Chg.	% of Total M1	% of GNP Act.	% of GNP "Norm"	Cur. ⁴/ (+)Const.	% Chg.	% of Credit Proxy	% of GNP Act.	% of GNP "Norm"	Cur. ⁴/ (+)Const.	% Chg.	% of Credit Proxy	Cur. ⁵/ (+)Const.	% Change	% of Credit Proxy
1960	N.C. N.C.	—	—	—	—	205.4 598.0	+12.7 +10.8	—	40.6	36.3	43.2 126.8	+13.1 +11.2	—	162.2 472.2	+12.6 +10.8	—
1961	↓					222.1 641.4	+8.1 +7.3		42.3	37.6	44.4 128.2	+2.8 +1.9		177.7 513.2	+9.6 +8.7	
1962						242.9 688.5	+9.4 +7.3		43.0	39.0	47.8 136.5	+7.7 +5.7		195.1 553.0	+9.8 +7.8	
1963						269.4 751.9	+10.9 +9.2		45.1	41.1	54.0 150.7	+13.0 +11.2		215.4 601.2	+10.4 +8.7	
1964						298.7 821.1	+10.9 +9.2		46.8	43.3	61.7 169.6	+14.3 +12.5		237.0 651.5	+10.0 +8.4	
1965						327.4 880.8	+9.6 +7.3		47.4	44.9	69.7 187.5	+13.0 +10.6		257.7 693.3	+8.7 +6.4	
1966						349.3 910.3	+6.7 +3.3		46.2	44.8	76.1 198.3	+9.2 +5.8		273.2 712.0	+6.0 +2.7	
1967						371.2 940.0	+6.3 +3.3		46.4	44.6	80.0 202.6	+5.1 +2.2		291.2 737.4	+6.6 +3.6	
1968						399.4 968.5	+7.6 +3.1		45.7	44.4	87.3 211.7	+9.1 +4.5		312.1 756.8	+7.2 +2.6	
1969	799.1 1842.1	— —	292.7	84.6	82.6	432.3 996.5	+8.2 +2.9	54.1	45.8	44.1	97.2 224.1	+11.3 +5.9	12.2	335.1 772.5	+7.4 +2.1	41.9

NOTES: (+): Constant 4th quarter 1981 dollars; (N.C.): Not Computed; (N.A.): Not Available.

WIS Credit Proxy

Sum of Principal Components of Non-Government Debt

	Components of Commercial/Industrial Debt														other Mortgage Debt		
	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
$Bil	Total Commercial and Industrial Debt					Corporate Bonds			Commercial Paper Excluding Financial Co.			Commercial and Industrial Business Loans			other Mortgages		
	Current $/ (t) Constant	% Change	% of Credit Proxy	% of GNP Act.	% of GNP "Norm"	Current $/ (t) Constant	% Change	% of Credit Proxy	Current $/ (t) Constant	% Change	% of Credit Proxy	Current $/ (t) Constant	% Change	% of Credit Proxy	Current $/ (t) Constant	% Change	% of Credit Proxy
1960	N.C. N.C.	–	–	–	–	N.A. N.A.	–	–	N.A. N.A.	–	–	32.6 94.9	+6.9 +7.2	–	45.2 131.6	+13.9 +12.0	–
1961												33.1 95.6	+1.5 +0.7		50.3 145.2	+11.3 +10.3	
1962												34.7 98.4	+4.8 +12.9		56.3 159.6	+11.9 +9.9	
1963												37.1 103.5	+6.9 +5.2		63.0 175.8	+11.9 +10.2	
1964												40.5 111.3	+9.2 +7.5		68.9 189.4	+9.4 +7.7	
1965												48.1 129.4	+18.8 +16.3		75.7 203.7	+9.9 +7.6	
1966												57.2 149.1	+18.9 +15.3		83.2 216.8	+9.9 +6.4	
1967												62.6 158.5	+9.4 +6.3		89.9 227.7	+8.1 +5.0	
1968									2.4 5.8			68.2 165.4	+8.9 +4.4		98.8 239.6	+9.9 +5.2	
1969	260.5 600.2	– –	32.6	27.6	26.6	177.0 408.0	–	22.1	4.9 11.3	+100+ +94.8	0.6	78.6 181.2	+15.2 +9.7	9.8	106.3 245.4	+7.6 +2.4	13.4

NOTES: (t): Constant 4th quarter 1981 dollars; (N.C): Not Computed; (N.A.): Not Available.

International Economic Comparisons

Annual Rates	World Total Money Supply Including Eurodollars & Xeno Currencies Current $/ $ Constant	World Total Domestic Money Supply	World Xenocurrencies Excluding Eurodollars	Total World Dollar Supply	Eurodollars	USA Dollars	Japan Yen	Europe Total incl other countries not shown	Germany Mark	England Pound
Monetary Growth Rates										
1980 year-end	+ 11.5	+ 5.6	+14.0	+17.0	+26.2	+6.6	-1.7	+7.7	+3.8	+3.0
Constant $	+ 1.8	- 3.6	+ 4.6	+ 6.3	+ 14.7	-3.2	-5.8	-3.1	-1.3	-13.3
5 yrs. 1976-80	+13.6	+7.3	+28.5	+14.7	+22.9	+7.3	+5.5	+12.3	+7.7	+11.8
Constant $	+ 5.6	+1.5	+19.6	+ 6.8	+ 14.5	-0.1	+0.3	+3.2	+3.6	-2.4
10 yrs. 1971-80	+14.0	+10.1	+32.2	+13.7	+26.6	+6.7	+11.8	+12.6	+9.1	+12.2
Constant $	+ 5.5	+ 1.9	+21.9	+6.2	+18.2	-0.3	+4.1	+3.1	+3.7	-1.4
10 yrs. 1961-70	+ 8.5	+ 7.1	NA	+6.6	NA	+4.3	+17.8	+8.5	+6.7	+3.8
Constant $	+ 4.7	+ 3.3		+3.5		+1.2	+12.0	+4.5	+3.0	-0.4
Money Supply as a % of GNP	% of World GNP		% of Foreign GNP	% of US GNP						
1980 year	34.8	21.7	6.5	35.7	20.5	15.2	27.3	27.7	15.9	14.6
5 yr. avg. 1976-80	33.2	22.6	5.1	33.0	16.7	16.3	29.8	27.7	16.0	16.4
10 yr. avg. 1971-80	31.9	23.5	3.9	30.8	12.9	17.9	32.1	27.4	15.4	18.1
10 yr. avg. 1961-70	27.5	25.9	NA	24.8	NA	23.8	27.0	26.7	15.8	24.5
Short Term Interest Rates (3 month Treasury Bills or equivalent)										
1980 year	11.1	NA	NA	NA	NA	11.6	6.3	12.4	9.6	15.1
5 yr. avg. 1976-80	7.8	NA	NA	NA	NA	7.8	5.0	9.0	5.3	11.1
10 yr. avg. 1971-80	6.7	NA	NA	NA	NA	6.8	5.4	7.1	5.0	10.4
10 yr. avg. 1961-70	4.2	NA	NA	NA	NA	4.4	5.8	3.2	3.5	5.7
Inflation Rates	world									
1980 year	+ 9.5	NA	NA	NA	NA	+ 9.7	+4.4	+11.2	+5.1	+18.8
5 yrs. 1976-80	+ 7.6	NA	NA	NA	NA	+ 7.4	+5.2	+8.7	+3.9	+14.5
10 yrs. 1971-80	+ 8.0	NA	NA	NA	NA	+ 7.0	+ 7.4	+9.2	+5.3	+13.8
10 yrs. 1961-70	+ 3.6	NA	NA	NA	NA	+ 3.0	+5.2	+ 3.8	+3.6	+4.2
GNP Growth Rates	world									
1980 year	+9.6	NA	NA	NA	NA	+9.4	+8.2	+10.3	+6.7	+16.0
Constant $	+0.2	↕	↕	↕	↕	-0.3	+4.4	-0.8	+1.6	-2.3
5 yrs. 1976-80	+11.2					+11.0	+9.7	+12.0	+ 7.4	+15.9
Constant $	+ 3.3					+ 3.4	+5.4	+ 3.0	+ 3.3	+ 1.1
10 yrs. 1971-80	+11.2					+ 10.5	+12.5	+11.8	+8.0	+16.4
Constant $	+ 3.0					+ 3.2	+ 5.3	+ 2.4	+ 2.6	+ 2.2
10 yrs. 1961-70	+8.7					+ 7.2	+ 16.2	+9.1	+8.7	+6.9
Constant $	+4.8	NA	NA	NA	NA	+ 4.0	+ 10.5	+ 5.1	+5.0	+2.5

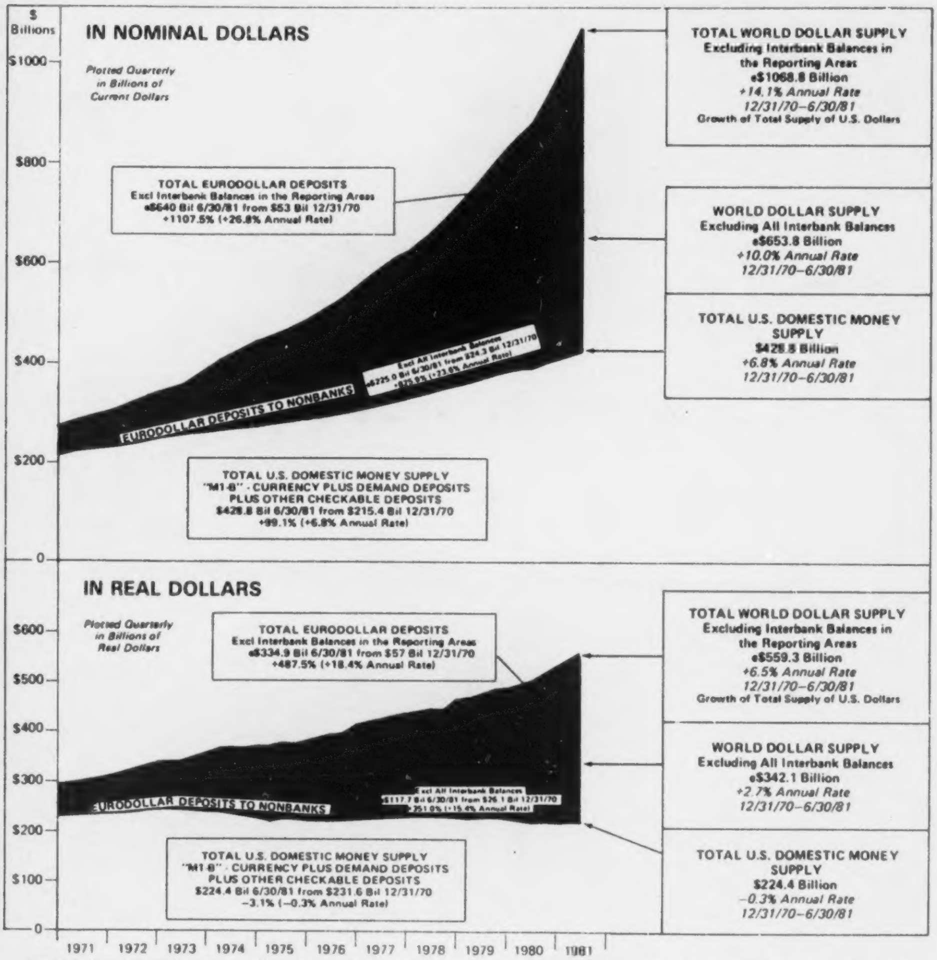
NOTES: (N.A.): Not Applicable; WORLD DATA are based on GNP weighted averages for U.S., Japan and major industrial nations of Europe; Eurodollars and Xenocurrency deposits are based on Reports by Morgan Guarantee; Unfortunately, 1980 is the latest date at which international data is uniformly available.

EURODOLLARS, INFLATION, AND EXCHANGE VALUE OF U.S. $

	U.S. MONEY SUPPLY (M1)					GROSS NATIONAL PRODUCT		TOTAL EURODOLLARS				EURODOLLARS TO NONBANKS				INFLATION			EXCHANGE
	$CURRENT		$(1972) CONSTANT		AS a %	$(1972) CONSTANT		$CURRENT		$(1972) CONSTANT		$CURRENT		$(1972) CONSTANT		WORLD COMMODITY PRICES	WORLD OIL PRICES	U.S. GNP DEFLATOR	VALUE OF THE U.S. DOLLAR
	$BILLION	% CHG	$BILLION	% CHG	of GNP	$BILLION	% CHG	$BILLION	% CHG	$BILLION	% CHG	$BILLION	% CHG	$BILLION	% CHG				
ANNUAL PERIODS																			
1970	216.5	+5.2	232.8	+0.2	21.5	1084.7	-0.1	59.0	+26.2	57.0	+20.3	24.3	+15.7	26.1	+10.1	-2.4	0.0	+5.0	97.4
1971	230.6	+6.5	236.8	+1.7	20.9	1135.4	+4.7	65.0	+22.6	66.7	+17.0	22.8	-6.2	23.4	-10.3	+0.8	+27.2	+4.7	91.5
1972	251.9	+9.2	248.2	+4.8	20.4	1214.8	+7.0	86.0	+32.3	84.7	+29.0	27.3	+19.7	26.9	+15.0	+39.9	+8.3	+4.2	89.7
1973	266.8	+5.5	244.5	-1.5	19.3	1247.0	+4.3	118.0	+37.2	108.6	+28.2	40.7	+49.1	37.4	+39.0	+59.8	+103.2	+7.1	84.5
1974	279.4	+4.8	231.9	-5.2	18.8	1232.4	-2.7	167.0	+41.5	139.6	+28.5	60.8	+49.4	50.8	+35.8	+1.8	+131.2	+10.0	82.9
1975	291.0	+4.9	226.1	-2.5	17.9	1259.7	+2.2	199.0	+19.2	154.6	+10.7	70.2	+15.5	54.5	+7.3	-9.1	-3.9	+9.6	87.7
1976	310.4	+6.7	230.3	+1.9	17.5	1315.4	+4.4	256.0	+28.6	189.9	+22.8	92.0	+31.1	68.2	+26.1	+38.1	+2.3	+4.7	88.8
1977	335.5	+8.1	234.8	+2.0	16.9	1391.5	+5.8	296.0	+15.6	209.1	+9.1	110.2	+19.8	77.1	+13.0	+3.1	+10.3	+6.0	85.7
1978	363.2	+8.3	234.3	-0.2	16.0	1465.8	+6.3	366.0	+23.6	236.1	+14.0	140.6	+27.6	90.7	+17.6	+15.5	0.0	+8.5	81.4
1979	389.0	+7.1	232.2	-0.9	15.6	1490.6	+1.7	443.0	+21.0	264.5	+12.0	183.6	+30.6	109.6	+20.8	+26.9	+89.0	+8.1	83.1
1980	414.5	+6.6	225.5	-2.9	15.2	1486.6	-0.9	559.0	+26.2	304.1	+15.0	240.5	+31.0	130.8	+19.5	+11.0	+33.3	+9.7	88.3
QUARTERLY PERIODS																			
1980 I	396.1	+6.4	230.8	-2.4	15.4	1501.9	+3.1	466.0	+12.3	266.4	+2.9	195.0	+29.2	113.9	+16.6	-16.8	0.0	+9.1	87.1
II	393.7	-1.4	224.6	-10.3	15.3	1463.3	-9.9	482.0	+24.8	295.0	+13.6	210.0	+34.5	119.8	+22.4	+58.9	+86.3	+9.9	81.0
III	410.7	+18.4	229.2	+8.4	15.6	1471.9	+2.4	511.0	+26.3	285.2	+15.7	226.0	+31.8	125.6	+20.8	+18.2	+31.8	+9.2	81.2
IV	414.5	+3.8	226.5	-6.3	15.2	1486.6	+3.8	659.0	+43.2	304.1	+29.3	240.5	+80.5	130.8	+17.6	-12.7	+29.5	+10.7	83.7
1981 I	424.4	+9.9	225.6	+0.2	14.9	1516.4	+8.6	581.0	+16.7	308.9	+6.5	258.8	+34.1	137.6	+22.5	-19.8	0.0	+9.8	88.0
II	428.4	+3.8	224.2	-2.5	14.8	1510.4	-1.6	608.0	+19.9	318.2	+12.6	293.3	+24.4	143.0	+16.6	-32.9	0.0	+6.4	92.4
III	431.2	+2.6	220.4	-6.6	14.5	1515.8	+1.4	NA	—	NA	—	NA	—	NA	—	-12.8	0.0	+9.9	91.7
IV	446.9	+9.3	220.3	-0.2	14.7	1498.4	-4.5	NA	—	NA	—	NA	—	NA	—	-13.9	0.0	+9.5	91.5
10 YEAR AVERAGE 1970-79																			
CUMULATIVE		+85.6		-1.0	—		+36.8		+454.8		+452.0		+774.3		+362.4	+332.2	+1677.8	+89.1	—
AVG ANNUAL RATE		+6.4		-0.1	18.5		+3.1		+26.6		+18.8		+24.2		+16.5	+15.8	+32.3	+6.5	87.3
PRIOR 10 YEAR AVERAGE 1960-69																			
CUMULATIVE		+44.4		+12.1	—		+50.8		NOMINAL		NOMINAL		NOMINAL		NOMINAL	+33.7	0.0	+30.9	—
AVG ANNUAL RATE		+3.7		+1.2	+24.5		+4.2		NOMINAL		NOMINAL		NOMINAL		NOMINAL	+2.9	0.0	+2.7	—

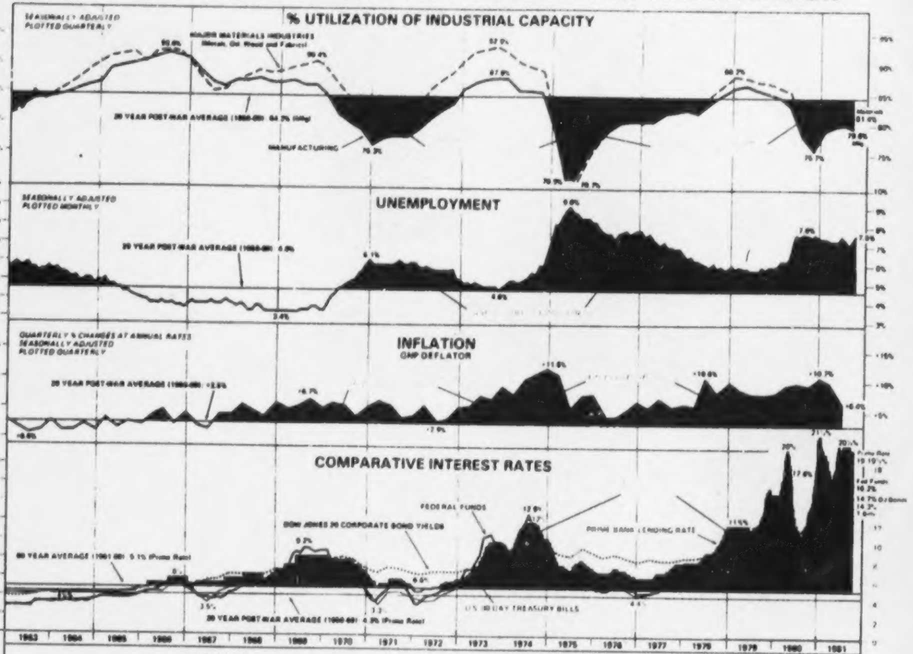
Eurodollar deposits are based on reports by Morgan Guaranty. N.A. = Not Available. Exchange value of the U.S. dollar based on an index of May 1970 = 100.

CUMULATIVE GROWTH OF THE WORLD DOLLAR SUPPLY



Eurodollar deposits are based on reports by Morgan Guaranty and have been estimated by *WIS* at the same percentages of all Eurocurrency liabilities as reported by Morgan Guaranty for gross Eurodollars as a % of gross bank liabilities of all Eurocurrencies; (e): Estimated by *WIS*.

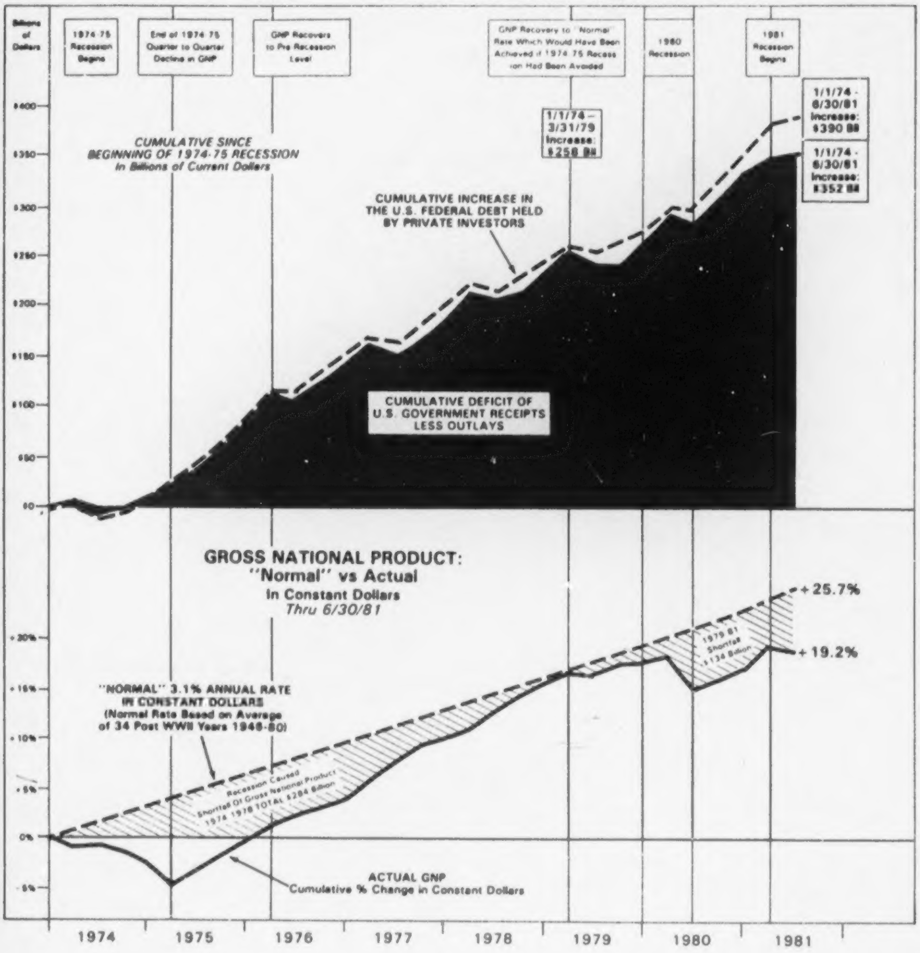
INTEREST RATES VS UTILIZATION OF RESOURCES AND INFLATION



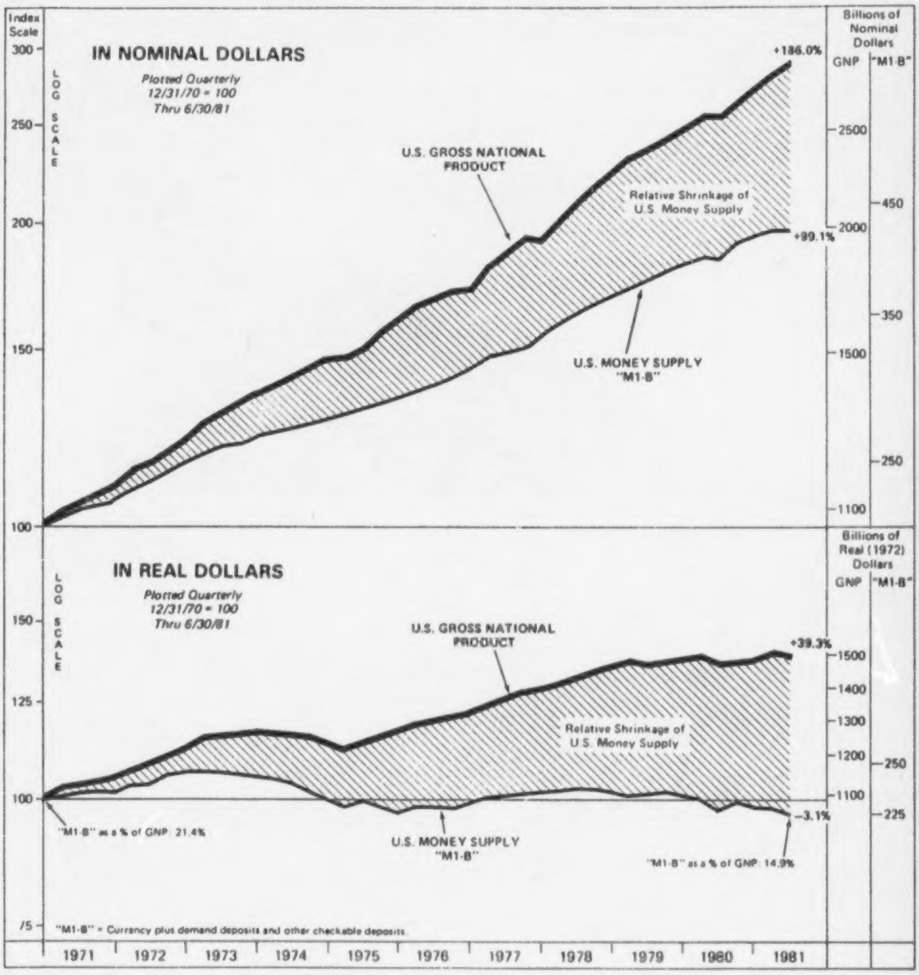
	% UTILIZATION OF INDUSTRIAL CAPACITY		UNEMPLOYMENT RATE	INFLATION RATE GNP DEFLATOR	COMPARATIVE INTEREST RATES			
	Manufacturing	Major Materials			PRIME BANK LENDING RATE	DOW JONES CORPORATE BOND YIELDS	FEDERAL FUND RATE	U.S. 90 DAY TREASURY BILL RATE
20 YEAR POST-WAR AVERAGE								
1960-1980	84.3%	85.8%	4.8%	+2.5%	4.3%	4.1%	*3.8%	3.0%
10 YEAR AVERAGES								
1960-69	84.9%	85.5%	4.8%	+2.5%	5.3%	5.1%	4.2%	4.0%
1970-79	81.7%	84.0%	6.2%	+6.5%	8.1%	8.2%	7.1%	6.3%
ANNUAL AVERAGES								
1970	79.4%	82.5%	4.9%	+5.4%	7.9%	7.8%	7.2%	6.4%
1971	78.4%	81.4%	5.9%	+4.9%	5.7%	8.0%	4.7%	4.3%
1972	83.4%	87.0%	5.6%	+4.2%	5.3%	6.7%	4.4%	4.1%
1973	87.6%	91.8%	4.9%	+5.7%	8.0%	7.6%	8.7%	7.0%
1974	83.8%	87.1%	5.6%	+8.7%	10.8%	8.2%	10.5%	7.9%
1975	72.9%	73.4%	8.5%	+9.3%	7.8%	9.0%	5.8%	5.8%
1976	79.5%	81.1%	7.7%	+5.2%	6.8%	8.8%	5.1%	5.0%
1977	81.9%	82.7%	7.0%	+5.8%	6.8%	8.2%	5.5%	5.3%
1978	84.4%	85.6%	6.0%	+7.4%	9.1%	8.6%	7.9%	7.2%
1979	85.7%	87.4%	5.8%	+8.5%	12.7%	9.5%	11.2%	10.1%
1980	79.0%	79.8%	7.1%	+9.0%	15.3%	12.0%	16.0%	11.6%
QUARTER ENDING RATES								
1980 I	83.4%	85.5%	6.2%	+9.1%	19.5%	13.0%	19.0%	14.8%
II	75.7%	75.7%	7.5%	+9.9%	11.5%-12.0%	10.8%	7.9%	7.7%
III	76.7%	78.4%	7.4%	+9.2%	13.0%	12.3%	12.5%	11.2%
IV	79.9%	81.3%	7.4%	+10.7%	20.5%-21.5%	12.9%	19.3%	14.4%
1981 I	79.9%	81.7%	7.3%	+9.8%	17.0%-17.5%	13.4%	15.5%	12.9%
II	79.7%	81.4%	7.3%	+6.4%	20.0%	14.0%	18.5%	14.3%
III	79.6%	81.4%	7.5%	-	19.5%	14.7%	16.2%	14.3%

(*) 15 YEAR AVERAGE

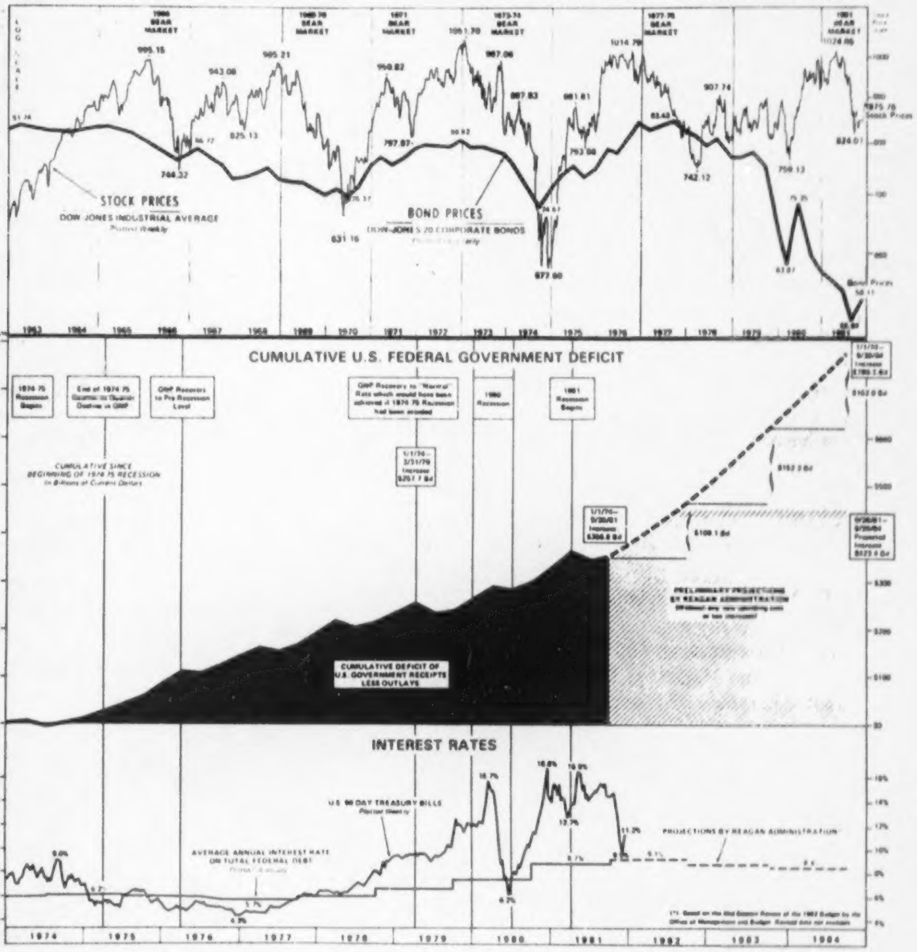
THE 1974-75 RECESSION NEARLY DOUBLED U.S. FEDERAL DEBT



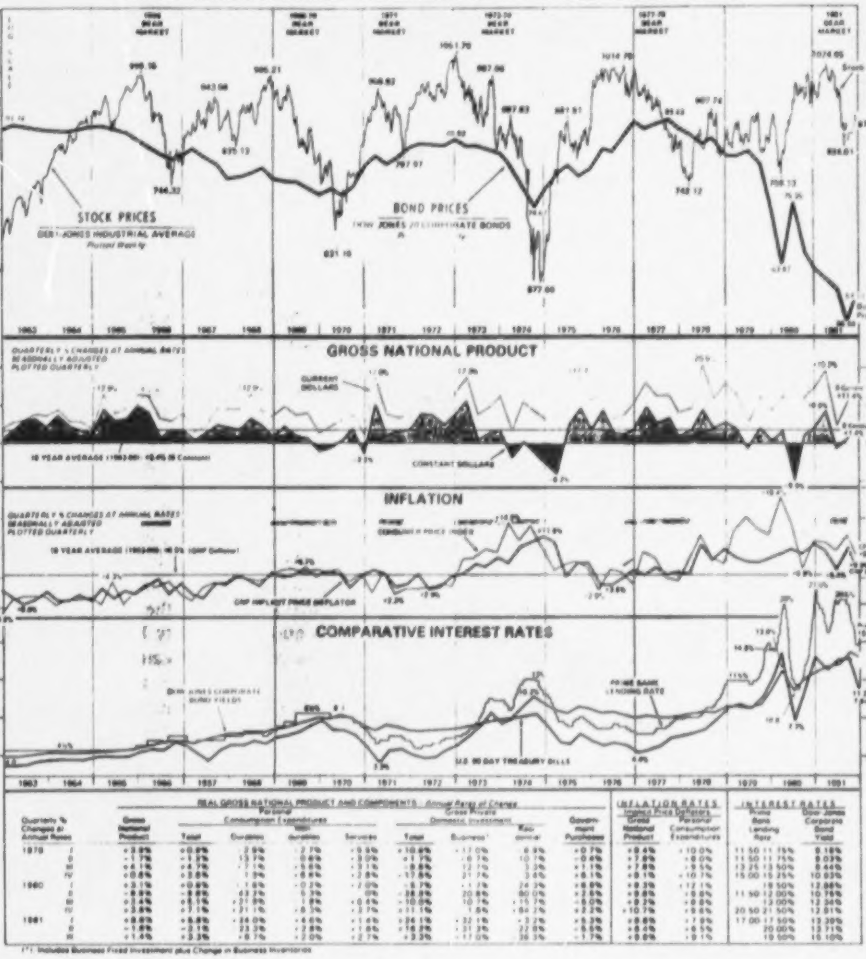
THE U.S. ECONOMY VS MONETARY POLICY



THE SECURITIES MARKETS VS U.S. BUDGET DEFICITS AND INTEREST RATES

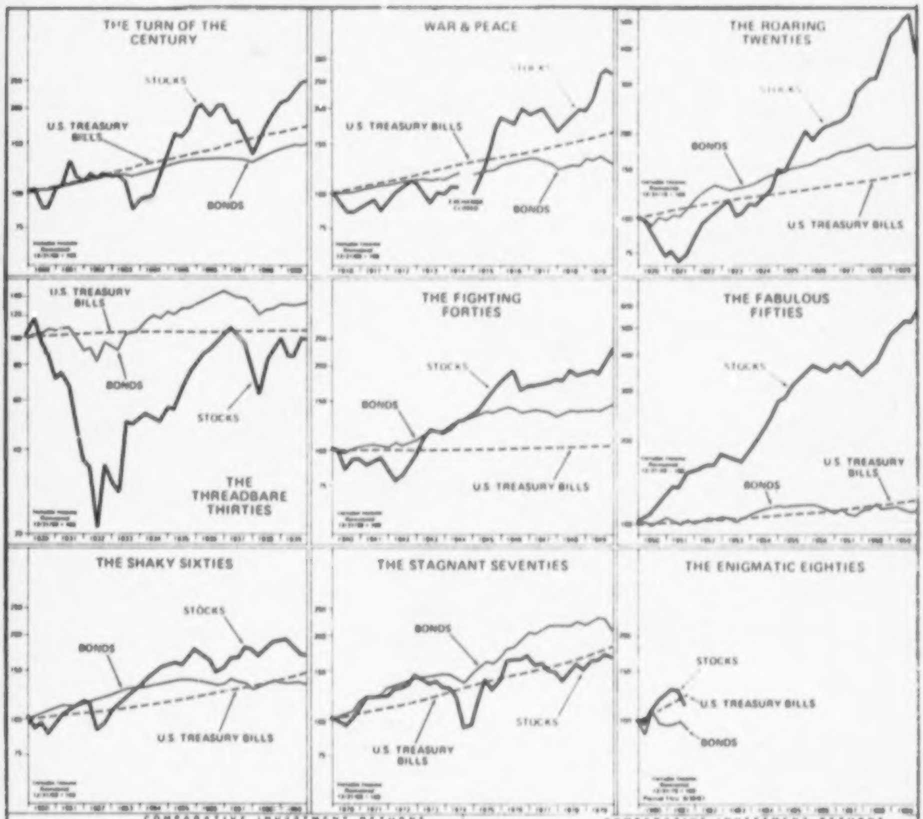


THE SECURITIES MARKETS VS THE ECONOMY



(*) Includes Business Fixed Investment plus Change in Business Inventories

NINE DECADES OF INVESTMENT GROWTH



COMPARATIVE INVESTMENT RETURNS

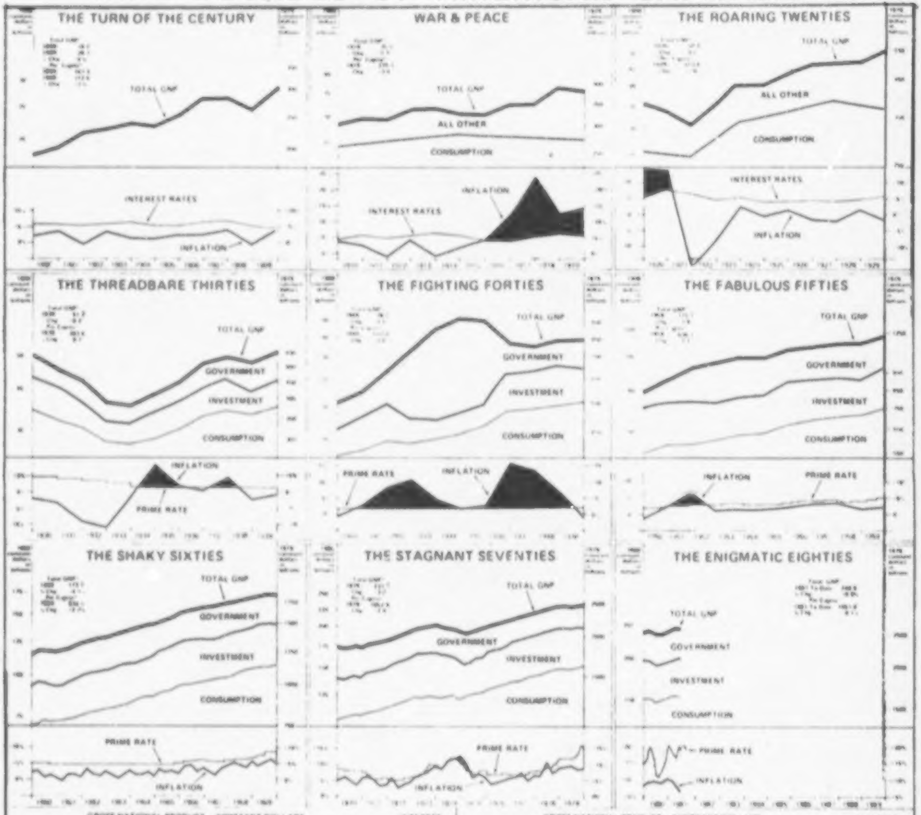
PERIOD	STOCK RETURN CUMULATIVE TOTAL % CHG	AVERAGE COMPOUND ANNUAL RATES STOCKS	BONDS	U.S. 90 DAY TREASURY BILLS	INFLATION GNP DEFLATOR
1900-09	+105.0%	+9.0%	+4.2%	+5.0%	+2.1%
1910-19	+167.5%	+10.3%	+2.0%	+5.7%	+7.2%
1920-29	+207.0%	+14.3%	+6.0%	+3.0%	1.0%
1930-39	0.7%	0%	+3.1%	+0.0%	1.5%
1940-49	+125.5%	+8.0%	+3.0%	+0.5%	+6.0%
1950-59	+484.5%	+18.9%	+1.1%	+2.0%	+2.5%

COMPARATIVE INVESTMENT RETURNS

PERIOD	STOCK RETURN CUMULATIVE TOTAL % CHG	AVERAGE COMPOUND ANNUAL RATES STOCKS	BONDS	U.S. 90 DAY TREASURY BILLS	INFLATION GNP DEFLATOR
1960-69	+67.2%	+5.3%	+2.0%	+4.0%	+2.5%
1970-79	+65.0%	+5.2%	+7.5%	+6.7%	+6.5%
1980-81 (To Date)	+12.0%	+7.1%	4.0%	+12.0%	+9.2%
81½ YEARS 1900-81 (To Date)	+99,970%	+9.0%	+3.7%	+3.0%	+3.3%

COMPARATIVE INVESTMENT RETURNS are based on the total return of price appreciation plus dividends reinvested. Dividends for the DOW JONES INDUSTRIAL AVERAGE for years prior to 1929 have been estimated based on the average annual dividend yields of industrial stocks published by The Cowles Commission. DOW JONES CORPORATE BOND AVERAGE yields and prices are based on the Dow Jones 10 industrial and 10 utility bond averages, but also include 20 railroad bonds during the period 1915-50 and prior to 1915 have been estimated based on Standard & Poor's [illegible] bond average.

NINE DECADES OF AMERICAN CAPITALISM



	GROSS NATIONAL PRODUCT – CONSTANT DOLLARS								
	Total	Consumption		Investment		Government		INFLATION	INTEREST RATES
PERIOD	% Chg	% Chg*	% of GNP	% Chg*	% of GNP	% Chg*	% of GNP	Annual Rates GNP Deflator	(Annual Average)
1900-1909	+4.5%	N.A.	–	N.A.	–	N.A.	–	+2.1%	5.0%
1910-1919	+2.3%	+0.5%	≈70.3%	N.A.	–	N.A.	–	+7.2%	5.2%
1920-1929	+3.0%	+3.0%	≈70.5%	N.A.	–	N.A.	–	1.6%	5.1%
1930-1939	+0.2%	+0.2%	77.5%	5.7%	7.0%	+7.5%	16.0%	1.5%	1.9%
1940-1949	+6.4%	+3.7%	62.0%	+7.5%	10.0%	+6.1%	25.5%	+6.4%	1.0%
1950-1959	+3.0%	+3.1%	60.2%	+5.5%	14.0%	7.1%	23.9%	+2.0%	3.4%
1960-1969	+4.1%	+3.8%	60.2%	+3.8%	15.2%	+5.2%	23.7%	+2.7%	5.3%

	GROSS NATIONAL PRODUCT – CONSTANT DOLLARS								
	Total	Consumption		Investment		Government		INFLATION	INTEREST RATES
PERIOD	% Chg	% Chg*	% of GNP	% Chg*	% of GNP	% Chg*	% of GNP	Annual Rates GNP Deflator	(Annual Average)
1970-1979	+3.2%	+3.2%	62.4%	+3.3%	15.7%	+1.0%	20.0%	+6.0%	8.1%
1980-1981 thru 6/30	+0.9%	+0.9%	63.2%	1.2%	13.0%	+1.3%	19.5%	+9.2%	16.0%
81½ YEARS 1900-1981 (to date)	+3.2%	(a)+3.2%	(d)60.1%	(b)+3.0%	(c)12.0%	(c)+2.9%	(c)21.5%	+3.1%	5.1%

(*) In [illegible] Constant Dollars at end of period. (**) From 1970 to date interest rates are based on avg annual Prime Bank Lending Rates. Prior to 1970 interest rates are based on avg annual Prime Commercial Paper Rates. (a) 77½ yrs. (b) 67½ yrs. (c) 57½ yrs. (d) Less than 10 yrs.